



REPUBLIC OF ZAMBIA

**STRATEGIC PLAN FOR MINISTRY OF SCIENCE,
TECHNOLOGY AND VOCATIONAL TRAINING
2003 - 2007**

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FOREWORD

This publication is the culmination of meticulous efforts by the senior management of the Ministry of Science, Technology and Vocational Training (MSTVT) at a workshop held at Mukuba Hotel, in Ndola from 25th to 31st August, 2002.

Senior management and key personnel of the Ministry including stakeholders from its statutory bodies attended this workshop. This workshop was intended to draw up a Strategic Plan that would guide the Ministry's operations and interactions with its various stakeholders. Covering the period January 2003 to December, 2007 the Strategic Plan is intended to be both responsive and proactive as well as withstand the various challenges that the vigour of time will visit upon the Ministry internally and in its wider local and international perspective.

The Ministry of Science, Technology and Vocational Training is a pivotal Institution in the affairs of this country as it carries the responsibility of articulating and implementing Zambia's Science, Technology and Vocational Training Policy. The Ministry facilitates the country's interaction with the International Community to fulfil its principal mandate of developing a national scientific and technologies capacity and provide highly skilled human resources for increased productivity in the economy. To effectively fulfil this lofty mandate the workshop developed this Strategic Plan, which interalia, defines the mission, goals objectives and activities of the Ministry. The Plan is therefore intended to act as a guiding framework to enable the Ministry discharge its functions in a more focused and effective manner.

The review and refinement of the initial Plan became necessary due to new development Science, Technology and Vocational Training and Entrepreneurship that took place. These developments were of a political, economic, social, cultural and environmental nature. It, therefore, became imperative to review the Plan so that it could continue providing rational guidance to the functions and operations of the Ministry. The revised Plan is therefore, complementary to the first one.

While lauding the commendable efforts of the Senior Management Team in producing this comprehensive document, such commendation would not be complete without mentioning the input of the various stakeholders who made constructive comments and critiques on the operation of the Ministry. I only hope that arising from your observations we shall further enhance the quality of our interaction to mutual benefit. Special thanks should also to the dedicated and very helpful team from the Management Development Division at Cabinet Office who not only facilitated the workshop, but also provided useful and

pertinent guidance to its deliberations and work plan. My Ministry is equally indebted to the Public Service Capacity Building Project (PSCAP) for its financial support that played a significant role in the whole process.

To all members of staff at the Ministry of Science, Technology and Vocational Training my message to you is that this is 'your document' I implore you all, regardless of your Department or Section, to read this document in its entirety and adhere to its contents otherwise the labour and spirited effort that went into its production shall be in vain. Let us focus on our objective of better service to our clients and above all to mother Zambia. The successful implementation of Science and Technology and the provision of Technical Education and Entrepreneurship Training will be needlessly tortuous if we do not give this document the attention and action that befits it.

We are all but various cogs of one wheel that would not move smoothly if one cog did not play its role. Therefore, our vision of success demands from us a disposition of team work, which can only bear fruit if each of us understands what is expected of our Ministry, ourselves and indeed our colleagues. That is why this document is before you.

Hon Abel M. Chambeshi, MP

MINISTRY OF SCIENCE, TECHNOLOGY & VOCATIONAL TRAINING

13 March 2003

1.0 INTRODUCTION

1.1 Background

1.1.1 The Ministry of Science, Technology and Vocational Training (MSTVT) is one of the Government Institutions, that is expected to play a major role in the socio-economic recovery programme of the country aimed at achieving sustainable economic growth and improving the well being of the people of Zambia. MSTVT is expected to provide an enabling environment for active participation of both the public and private sectors in the development and application of science and technology and the provision of technical education, vocational and entrepreneurship training.

1.1.2 Accordingly, MSTVT is required to provide and monitor the implementation of the policy and legal framework that will facilitate the participation and contribution of the private sector in the development and application of science and technology and the provision of technical education, vocational and entrepreneurship training.

1.1.3 In line with the Government's general policy framework and according to Government Gazette Notice Number 46 of 24th January, 1992, MSTVT is responsible for the following portfolio functions:

- Policy and administration of Technical Education and Vocational Training;
- Trade Training Institutes;
- Technical Colleges;
- Technologist Training;
- Art Training and Promotion;
- Secondary Technical Teacher Training;
- Curriculum Development; and
- Co-ordination of Technical Training.

1.1.4 In addition, MSTVT is also responsible for the following statutory bodies and institutions:

- Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA);
- National Institute for Scientific and Industrial Research (NISIR);
- National Science and Technology Council (NSTC); and
- National Technology Business Centre (NTBC).

1.1.5 In effectively pursuing these portfolio functions, and as part of the restructuring of the Public Service under the Public Service Reform Programme (PSRP) that is aimed at improving performance and service delivery, MSTVT developed a five year Strategic Plan in 1995. The Plan defined, among other things, MSTVT's clients and their needs, the

Mission, Goal, Objectives and their corresponding activities. The Mission Statement was:

“Promotion of science and technology and vocational training for sustainable economic growth in the formal and informal sectors.”

The Goal Statement was:-

“To develop a national scientific and technological capacity and provide highly skilled human resources for increased productivity in the economy.”

1.1.6 The thrust of the Strategic Plan was for the Ministry to play a facilitative role in ensuring the development and application of science and technology and the provision of quality technical education, and vocational training in order to enhance productivity in the country. Through this Strategic Plan, the Ministry in collaboration with its stakeholders was to provide an appropriate policy framework to guide the operations, development and application of science and technology and the provision of technical education and vocational training in the country. The Strategic Plan was also meant to facilitate the restructuring of the Ministry is meant in part to facilitate effective implementation of the Strategic Plan.

1.1.7 Since 1995 when the Strategic Plan for MSTVT was developed, some developments have taken place in the country and key policy decisions have been made by Government which have had a bearing on the structure and operations of the Ministry. These include:

- Enactment of the Science and Technology Act No. 27 of 1997.
- The transformation of the National Council for Scientific Research into the National Institute for Scientific and Industrial Research in 1998.
- Enactment of the Technical Education, Vocational and Entrepreneurship Training Act No. 13 of 1998.
- Creation of the Department of Vocational Education and Training in 1999.
- Establishment of Management Boards in Training Institutions in the Year 2000.
- Creation of the Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA) in the Year 2000.
- Establishment of the National Science and Technology Council in the Year 2000.
- Formulation of the Technical Education Vocational and Entrepreneurship Training (TEVET) Development Programme in 2001.
- Establishment of the National Technology Business Centre in 2001.

- 1.1.8 The developments highlighted above have resulted in the strengthening of the legal framework for the science and technology, and the technical education, and vocational training sectors, enabling the Ministry to effectively play its regulatory role. In addition, the reforms have resulted in the rationalisation of the science and technology systems and decentralisation of the management of training institutions under the Ministry.
- 1.1.9 These developments necessitated the review of the 1995-2000 Strategic Plan for MSTVT in order to re-align it with the changes in the environment and enable MSTVT to further improve the quality of service delivery to its clients. The revised Strategic Plan is also meant to enable MSTVT to effectively contribute to poverty reduction, which is the nation's top priority, through effective application of science and technology.
- 1.1.10 Consequently, a Strategic Plan review workshop was held from 25th to 31st August, 2002 at Mukuba Hotel, Ndola. The workshop was attended by Senior Management and key personnel of MSTVT and stakeholders from its statutory bodies and was facilitated by Management Development Division/Cabinet Office with financial support from the Public Service Capacity Building Project (PSCAP).
- 1.1.11 The revised Strategic Plan is, therefore, an outcome of the workshop. It is intended to revitalise the operations of MSTVT in order to enable it contribute effectively to improved productivity and application of science and technology for sustainable growth of the national economy. It defines the MSTVT's mission (vision of success), goal (specific target), objectives (what it intends to achieve within the next five years), and maps out strategies (means) to achieve the objectives and ultimately the mission.

1.2 Plan Coverage

1.2.1. The revised Strategic Plan covers the following:

(a) **Environmental Analysis**

This is an analysis of both the internal and external environment in which MSTVT has been operating in the last five years and is expected to operate in the next five years. The analysis takes into account the performance of MSTVT in the last five years and the major socio-economic and political developments that have taken place which have had an impact (positive or negative) on its operations and which may be of significance in future.

From this analysis, MSTVT's Strengths and Weaknesses as well as Opportunities and Threats (SWOT) are identified. In addition, MSTVT's clients and their needs that it is expected to be

addressing are defined and the strategic/core issues that need to be resolved in order to make significant improvements in the quality of service delivery are discussed.

(b) **Mission Statement**

The revised mission statement, justifying the fundamental purpose for the existence of MSTVT in the next five years is presented and discussed. It provides for a new vision of success that MSTVT will strive towards and a framework within which management decisions will be made and programmes, projects and activities will be undertaken in the next five years.

(c) **Goal Statement**

The goal statement, projecting strategically what MSTVT intends to practically achieve in the next five years and providing it with an operational direction and focus, is redefined in line with the revised mission statement and taking into account the issues raised under the environmental analysis.

(d) **Objectives and Output Indicators**

The revised objectives, which are specific, measurable and result-oriented statements of what MSTVT intends to achieve in the next five years are presented and discussed. The objectives have been revised in line with the revised mission and goal statements and taking into account MSTVT's accomplishments in the last five years, the revised needs of its clients and national priorities.

The revised objectives are accompanied by output indicators, which are products by which the achievement of the revised objectives will be measured. These are also presented and discussed.

(e) **Strategies**

The preferred overall means or courses of action that MSTVT will take in order to achieve the objectives and effectively address the strategic/core issues identified are also presented and discussed, taking into account the SWOT of MSTVT.

(f) **Pre-Conditions**

Factors that are considered to be crucial to the successful implementation of the Strategic Plan and which must, therefore, be in place, are also highlighted. Some of the factors may be outside the control of MSTVT in which case cooperation and support from other institutions and authorities will be critical in

ensuring that an enabling environment is created for the successful implementation of the revised Plan.

(g) **General Assumptions**

The general conditions that should exist at both the organisational level and in the external environment to ensure successful implementation of the revised Strategic Plan are outlined.

(h) **Linking the Strategic Plan to the Budgeting process**

Budgeting is an integral part of the Strategic Planning process. Strategic Plans are implemented by breaking them down into annual departmental and individual work plans. The annual department work plans are costed and form the basis for the ministerial/institutional annual budgeting process. The principles for linking the revised Strategic Plan to the budget and, therefore, for operationalising it, are discussed.

2.0 ENVIRONMENTAL ANALYSIS

MSTVT, like any other government ministry, operates in a dynamic political, economic, social and technological environment. An understanding and appreciation of this environment, both internal and external to MSTVT, is necessary to developing a realistic Strategic Plan to guide the operations of the Ministry in the next five years.

2.1 External Environmental Analysis

2.1.1 One of the major developments that will continue to impact on the operations of MSTVT is the multi-party democracy political dispensation re-introduced in the country in 1991. As this dispensation takes root in the country, divergent views emerge on how best to develop and manage the science and technology and technical education and entrepreneurship training sector. Different key stakeholders, including political parties and trade unions, articulate different policies and ideas for operating the sector. There is need, therefore, for MSTVT to develop and implement effective consultative mechanisms to ensure that programmes designed on the development and application of science and technology and the provision of technical education and entrepreneurship training in the country meet the expectations of the various stakeholders.

2.1.2 Related to multi-party democracy is the growing demand for good governance, both locally and internationally. The people of Zambia and the international community are increasingly assessing and evaluating the effectiveness and efficiency of the Government and its institutions using the good governance

criterion. For MSTVT, this implies that it should embrace the principles of transparency and accountability when mobilising and utilising resources needed to implement the revised Strategic Plan successfully. Furthermore, this requires MSTVT to consult stakeholders and engage them in meaningful dialogue during the implementation of the revised Strategic Plan in order to meet their performance criteria, some of which are based on good governance.

- 2.1.3 In addition to the political environment, the economic environment has a significant bearing on the operations of MSTVT. From 1991, the MMD Government has been pursuing a macro-economic policy framework aimed at enhancing economic stability and growth, and maintaining a stable exchange rate both of which are a pre-requisite to sustainable economic development. The ultimate goal is to reduce the incidence of poverty to about fifty (50) percent and inflation by four (4) percent by 2004 and improve the well being of the people of Zambia.
- 2.1.4 Implementation of this overall macro-economic objective has taken several forms, including the liberalisation of the economy and privatisation of state-owned companies. By October 2001, 258 state-owned companies had been privatised. This has led to a significant expansion of the private sector and a corresponding decline of the public sector. While privatisation and liberalisation have impacted positively on some elements of the economy by allowing Government to concentrate on the provision of collective goods and services to the people of Zambia, it has so far impacted negatively on the development of the science and technology sector in the country. New company owners have preferred importing technologies available on international markets to those developed and adopted locally. There is need, therefore, for MSTVT to identify and implement strategies that will encourage industries to utilise locally developed and adopted technologies in their production processes, and where possible develop technologies that are appropriate to the country.
- 2.1.5 Generally, the performance of the economy has not improved much despite Government efforts aimed at enhancing economic stability and growth. Both negative and positive GDP growth rates have been recorded. Between 1994 and 2001, for example, the growth rate was negative in 1994 and 1995 and positive in 1996, 1997, 2000 and 2001. However, even the positive growth rates recorded have not been sufficient enough to turn the economy around. This has been happening at a time when the country's population is undergoing rapid growth. From 7.2 million in 1990, the population had increased to 10.3 million by the Year 2000. This represents an average growth rate of about 3.2 percent annually. The inverse relationship between the growth rates of GDP and the population has resulted in a decline in the country's

GDP per capita. From US\$ 421.2 in 1991, it had decline to US\$ 402.7 in 1997. The average GDP per capita over this period was US\$ 380. This poses a challenge to MSTVT to develop and promote the application of science and technology by both formal and informal sector enterprises in order to enhance productivity in the country necessary for wealth and job creation.

- 2.1.6 One of the most outstanding economic problems Zambia was facing prior to the implementation of the stabilisation and adjustment programmes was the external debt burden. Despite vigorous attempts at structural adjustment, there has been no significant change in Zambia's external debt situation. From US\$ 7.223 billion in 1990, Zambia's external debt still stood at a staggering US\$ 7.270 billion by December 2001. This is well over ten times Zambia's annual GDP which stood at ZMK 2, 628.9 billion in 2001. The debt per capita currently stands at over US\$700, making Zambia's external debt burden one of the largest in the world today. The challenge to MSTVT is to find alternative ways of mobilising resources necessary to successfully implement the revised Strategic Plan since resources coming from the treasury will be limited and the country will continue to meet its debt obligations though at a reduced rate as provided for under the Highly Indebted Poor Countries (HIPC) initiative.
- 2.1.7 Another economic problem currently facing the country is the balance of payments problem, which emerged in 1975 with the fall in copper prices at the world market. This important macro-economic indicator has remained negative over the years. From minus US\$ 356 million in 1990, the figure had reduced significantly to minus US\$ 139 million by 1997 only to rise again to minus US\$ 221 million in 2000 and to minus US\$355 million in 2001. This has impacted negatively on Governments ability to provide adequate funding to Government ministries, including MSTVT, as Governments' attention has been, sometimes, diverted to improving the balance of payments position at the expense of developmental programmes. The challenge to MSTVT is how to assist the country emerge from these economic doldrums through the use of science and technology and the provision of highly skilled human resources.
- 2.1.8 High unemployment levels in the country have been one of the major consequences of the poor performance of the economy. This has led to a lateral expansion of the informal sector and a significant increase in the incidence of poverty with over 70% of the population being classified as poor. Declining job opportunities in the formal sector coupled with the need to supplement declining formal sector incomes and, thus, maintain accepted living standards, have accelerated the informalisation of production and employment in the country. There is need, therefore for MSTVT to provide informal sector operators with appropriate scientific

knowledge and technologies and entrepreneurship skills to enable them become more productive and, therefore, create more job opportunities and wealth.

2.1.9 The HIV/AIDS pandemic is another significant factor that has impacted negatively on MSTVT. It has affected its operations through loss of staff and productive hours due to the frequent absence of officers attending funerals, attending to the sick or themselves being sick. MSTVT needs to intensify HIV/AIDS prevention programmes in the Ministry in order to reduce its negative impact on the operations of the Ministry.

2.1.10 MSTVT operations have also been influenced by technological developments. Rapid technological developments mean that MSTVT has to continuously update its equipment in order to be current with global trends in R&D and other operations. This can only be done at great cost. In addition, MSTVT is under pressure to computerise its operations in order to improve the efficiency and effectiveness in service delivery as institutions, including Government ministries, computerise their operations because of the benefits derived from it. However, computerisation in MSTVT is dependant on its ability to acquire and update its information technology facilities and skills, which is an expensive and continuous exercise. The challenge to MSTVT is to determine how best it should effectively benefit from available information technology at optimum cost.

2.2 Internal Environmental Analysis

2.2.1 Performance Audit

In reviewing MSTVT's 1995 – 2000 Strategic Plan, an audit of its performance during the period under review was conducted. The sole objective of the audit was to establish the extent to which MSTVT had implemented its Strategic Plan and the impact this has had on the quality of service delivery to its clients and on the scientific and technological base of the country.

Generally, the performance audit revealed that the 1995 -2000 Strategic Plan was not fully implemented. This means that the mission and goal of MSTVT for the period under review were partially achieved. A number of factors contributed to the Ministry's failure to perform as expected. These included the delay in implementing the new structure for the Ministry, inadequate funding and a critical shortage of specialised staff in some departments, poor salaries and conditions of service, and a general lack of knowledge about the existence of the Strategic Plan among the majority of staff in the Ministry. Despite these limitations, MSTVT was able to implement some activities in the Plan through its specialised departments as follows:

(a) **Administration and Human Resources**

The Administration and Human Resources Department facilitated the production of work plans and annual progress reports for the Ministry and implementing agencies on a yearly basis. Furthermore, the department facilitated the development of job descriptions and specifications for all established posts in the new structure with assistance from Management Development Division. Other important activities undertaken by the department included the development and implementation of training plans, securing funds and procurement of materials for providing logistical support in the Ministry, and facilitating the filling of vacancies in the Ministry. However, the department could not provide actual figures on the staff trained, those that resigned and the number of strategic positions filled in the Ministry.

(b) **Vocational Education and Training Department**

The department conducted tracer studies in Lusaka and Copperbelt provinces and reviewed and strengthened consultative committees between MSTVT and stakeholders on an annual basis. In addition, the department facilitated meetings of the Consultative Committees whenever they were held. The department also mounted HIV/AIDS awareness programmes in the Ministry. In addition, the department updated and procured equipment and tools for Lusaka Trades Training Institute and the Northern Technical College and revised the TEVT Act into the TEVET Act No. 13 of 1998. The department could not directly perform a number of functions such as developing and revising curricula and attaching lecturers to industries during holidays because the department was pre-occupied with the reform process which included the creation of institutional management boards.

Information on the performance of the department was scanty and hindered compilation of a proper account of the department's performance and its impact during the period under review.

(c) **Planning and Development Department**

During the period under review, the Planning and Development Department conducted a survey of existing institutions and produced detailed reports with costing on the training and science and technology sectors. The department also produced annual budgets for procuring necessary tools and training equipment but failed to secure funds to implement the budget. The department established a personnel and student database and facilitated the production of annual reports on the operations of the Ministry.

During the period under review, the Department co-ordinated all Joint Permanent Commissions and Technical Cooperation activities including arranging exchange visits of experts in training and research institutions. The Department also facilitated the rehabilitation of infrastructure and played a major role in planning for the expansion of training provision. During the transition to Management Boards, the Department facilitated the preparation of strategic and business plans for both training and science and technology institutions.

Favourable factors that enabled the department execute the above stated activities included availability of computers. However, the department was unable to achieve all its planned activities including coordinating, monitoring and evaluation of programmes and projects due to inadequate funding and because, during the latter half of the Plan period, the number of its professional staff was reduced from seven to four.

(d) **Department of Science and Technology**

The Department of Science and Technology developed the National Policy on Science and Technology in 1996 and facilitated the enactment of the Science and Technology Act No. 26 of 1997. The Department also facilitated the transformation of the National Council for Scientific Research into the National Institute for Scientific and Industrial Research (NISIR) in 1998 and established the National Science and Technology Council in 2000 and the National Technology Business Centre (NTBC) in 2001. In addition, the Department undertook studies and spearheaded plans to establish training Cum Production Centre for Gemstone processing for small-scale miners, and the National Remote Sensing Centre (NRSC) in 2001.

Although the Department was able to achieve the performance outlined above, it had difficulties in executing a number of activities outlined in the 1995-2000 Strategic Plan. Among others were those relating to enforcement of standards and quality control of technologies and integrating R and D centres existing in other line Ministries under one umbrella. The Department failed to achieve the latter because other line Ministries could not see the advantages of falling under the umbrella of the National Science and Technology Council.

2.3 Identification of Strengths, Weaknesses, Opportunities and Threats (SWOT Analysis)

A number of factors provided MSTVT with opportunities to perform better while others limited its ability to fully deliver on its Mandate. These factors may still be significant for MSTVT in future and they include:

(a) Strengths

Among the major strengths of MSTVT are the following:

i) Commitment to Reforms by Management

MSTVT has been implementing a number of reforms since 1995 in the context of the Public Service Reform Programme. These reforms have taken several forms and magnitudes and include the establishment of the Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA), the creation of the National Science and Technology Council and the devolution of power to Management Boards of Training Institutions. The commitment to reforms exhibited by management in the Ministry contributed greatly to the success of the reforms implemented. This commitment will enable the Ministry effectively implement the revised Strategic Plan and the remaining aspects of the Public Service Reform Programme. There is need, therefore, to ensure the retention of a visionary and competent management team if MSTVT has to effectively implement its revised Strategic Plan and realise its vision.

(ii) Status and Profile of the Ministry

MSTVT has the overall mandate on all matters regarding science, technology, technical education, vocational and entrepreneurship training in the country. This position enables MSTVT to take the lead and determine priorities in the development and application of science and technology in the country and in the provision of quality technical education, vocational and entrepreneurship training in consultation with stakeholders. Furthermore, the importance and status of science and technology portfolio in national development should enable the Ministry to receive a lot of attention from Government which views it as a vehicle to sustainable national development.

(iii) Availability of Infrastructure

MSTVT has physical infrastructure throughout the country, which makes it possible for the Ministry to discharge its functions. This infrastructure includes colleges, laboratories, and Research and

Development stations. Through this infrastructure, the Ministry has been able to conduct extensive research and development activities in science and technology as well as undertake various forms of technical education, vocational and entrepreneurship training to meet some of the needs of the economy.

(iv) Good Working Environment

MSTVT has a relatively good working environment in terms of physical infrastructure and communication facilities especially at the Ministry Headquarters. With this conducive working environment, officers will be able to perform their functions relatively well. This will facilitate the full implementation of the revised Strategic Plan.

(v) Availability of Legal and Policy Framework

MSTVT facilitated the enactment of the Science and Technology Act of 1995 and the Technical Education and Entrepreneurship Act No. 26 of 1997 and the Technical Education, Vocational and Entrepreneurship Training Act No. 13 of 1998. In addition, the Ministry has developed the Technical Education, Vocational and Entrepreneurship Training (TEVET) Policy of March 1996 and the Science and Technology Policy. These pieces of legislation and policies have provided MSTVT with an appropriate legal and policy framework necessary for it to effectively implement its mandate and the revised Strategic Plan and guide other stakeholders in the sector.

vi) Availability of Institutional Framework for R&D and TEVET

Research and Development (R&D) and Technical Education and Entrepreneurship Training are the major functions of MSTVT. In order to effectively execute these functions, MSTVT has established an appropriate institutional framework which includes the Technical Education and Vocational Training Authority (TEVETA), National Institute for Scientific and Industrial Research (NISIR), National Science and Technology Council (NSTC) and the National Technology Business Centre (NTBC) and institutional management boards. There is need for MSTVT to undertake continuous human and institutional capacity building in order for this

institutional framework to contribute effectively to the attainment of the objectives for which it was established.

vii) Effective Coordination with Co-operating Partners

MSTVT has put in place mechanisms that have resulted in effective collaboration between the Ministry and co-operating partners. This has resulted in MSTVT receiving increased financial and technical support from the co-operating partners. Continued effective collaboration with cooperating partners will ensure provision of supplementary resources for the implementation of the revised Strategic Plan. MSTVT should take advantage of this support by channelling the resources provided to build capacity in priority areas, such as human resource development, infrastructure rehabilitation and provision of relevant tools and equipment. Furthermore, the Ministry should ensure continued compliance with the principles of transparency and accountability in the application of the support from cooperating partners for purposes of effective utilisation and continued support and goodwill.

viii) Availability of Critical Human Resources

MSTVT has personnel who are technically qualified in most of the disciplines related to the operations of the Ministry. In addition, the personnel are also experienced and capable of undertaking the tasks in their respective portfolios. The staff is also committed to their duties. In this regard, the Ministry should continuously upgrade the skills of its human resources to keep abreast with changes in the environment and continuously improve on its performance. Furthermore, the Ministry should identify and provide incentives to its personnel in order to keep them motivated and committed.

b) Weaknesses

Notwithstanding the strengths highlighted above, MSTVT has weaknesses, which impacted negatively on the implementation of the 1995-2000 Strategic Plan. These need to be addressed in order for the revised Plan to be effectively implemented. The following are the weaknesses identified for MSTVT: -

(i) Inadequate Implementation of the Inspectorate System

MSTVT has developed an effective inspectorate system for enforcing standards in both Government and private training institutions in order to ensure the provision of quality training. However, the inspectorate system has not been adequately implemented resulting in poor standards of training being offered in both Government and private training institutions. There is need, therefore, for MSTVT to adequately implement the inspectorate system in order to improve the quality of training in both Government and private training institutions and effectively meet the needs of the labour market.

(ii) Mismatch Between Training Provided and Informal Sector Needs

The technical education, vocational and entrepreneurship training provided by Government training institutions under MSTVT is expected to meet the requirements of industry in both the formal and the informal sectors. However, there is a mismatch between the knowledge and skills provided in the training institutions and the demands of the informal sector operators. There is need, therefore, for training institutions under MSTVT to conduct regular and thorough needs assessment exercises of informal sector knowledge and skills requirements in order for the training institutions to provide training relevant to the dynamic requirements of the informal sector and industry in general.

(iii) Inadequate Office Accommodation

MSTVT is faced with a shortage of office accommodation, resulting in some units in the Ministry operating in rented accommodation and offices carrying out similar functions being geographically isolated from each other. This has prevented effective coordination of the activities and weakened teamwork in the Ministry. There is need, therefore, for management in MSTVT to find adequate office accommodation for most of its departments, if not all, under one roof to enhance coordination and teamwork in the Ministry.

(iv) Poor Commercialisation of R&D Products

One of the major functions of MSTVT is to undertake research and development activities in science and technology. Consequently, the Ministry has established the National Institute for Scientific and Industrial Research to undertake research and development activities. However,

the institutions have not been proactive in their approach to R&D, resulting in very few activities being commercialised. There is need, therefore, for MSTVT to sensitise the management of R&D institutions on the need to be proactive in their work. MSTVT should set targets against which the performance of the institutions can be measured.

(v) Inadequate Capacity to Manage R&D Systems

The R&D systems that have been established under MSTVT have not adequately responded to the developmental needs and demands of the new socio-economic environment in the country. Therefore, MSTVT needs to build human and institutional capacity to manage R&D if the country is to benefit from the R&D institutions it has created.

(vi) Absence of a Continuous Induction System for Management Boards

MSTVT has established Management Boards to manage the operations of all Government training institutions under the Ministry. This has been done in order to allow training institutions respond effectively to local labour markets by shortening the decision making process and involving the local community in the management of the institutions. Despite these good intentions, however, the operations of the Management Boards have sometimes been in conflict with Government policies and guidelines. This is because members of the Management Boards have not been regularly inducted to enable them understand their role. There is need, therefore, for MSTVT to hold regular induction and re-orientation programmes for members of Management Boards to ensure effective implementation of Government policies and the smooth operations of the training institutions.

(vii) Low Priority accorded to Research and Development

Although MSTVT has put in place a number of measures including an institutional and policy framework for R&D, the Government still accords low priority to research and development as evidenced from the low funding levels allocated to this portfolio, among other things. This has resulted in lack of appropriate technologies being developed and adopted for use by both large and small-scale industries in the country. There is need for MSTVT to prioritise R&D in terms of funding and programming in order to ensure that appropriate technologies are developed and adopted for use by both large and small-

scale industries in the country to increase their productivity and competitiveness.

(viii) Inadequate Provision of Information

The functions being performed by various departments and units under MSTVT are critical to the socio- economic development of the country. Despite the various reforms and programmes that have been implemented in the Ministry, there is a general lack of public knowledge on these activities. This has impacted negatively on the status and profile of science and technology in the country. There is need, therefore, for MSTVT to establish effective information management and dissemination mechanisms in order to provide relevant information to the general public and raise awareness on and appreciation of the operations of the Ministry.

(ix) Insufficient Consultative Mechanism with stakeholders

The effective performance of MSTVT is dependant on a number of key factors, including the approval of and involvement of its various stakeholders in its programmes and activities. These stakeholders have to be consulted whenever important programmes and activities are being considered for implementation. However, this has not always been the case for MSTVT, resulting in some aspects of the reforms not being effectively executed. There is need, therefore, for MSTVT to establish and implement effective consultative mechanisms with its stakeholders in order to enable them contribute positively to the performance of the Ministry.

(x) Lack of Rationalisation in Science and Technology

MSTVT is mandated under the new Science and Technology institutional framework to coordinate and monitor policy implementation in R&D in order to maximise returns on investment by not duplicating efforts and resources by R&D institutes. To achieve this, the National R&D System needs to be rationalised and brought under one umbrella. Due to inadequate legal provision under the ACT, the rationalisation of the R&D system is yet to be realised. There is need, therefore, to strengthen the necessary legal provisions in the Science and Technology Act No. 26 of 1997 to enable the Ministry rationalise the use of R&D facilities and effectively coordinate efforts of the various R&D centres and ensure optimisation of returns on investment.

(xi) A Weak National Qualification Framework

The number of institutions offering various types of training and at different levels has continued to grow in the country. Although this is a positive development in terms of increased supply of training to school leavers, it has created a number of problems including difficulties in establishing equivalences and lack of progression in training. This problem has been compounded by the existence of a weak national qualification framework in the country which has resulted in poor standardisation of training and inability to accredit prior learning, which has in turn resulted in wastage of human resources. There is need, therefore, for MSTVT to strengthen the national qualification framework to facilitate standardisation of training, establishment of equivalences in qualifications, and enhance training progression and accreditation. This will also minimise human resource wastage in the country.

(xii) Poor and Dilapidated Physical Infrastructure

Most of the infrastructure in MSTVT, both in R&D and training institutions, is in a poor state, making it not conducive for the purposes they were created. There is need, therefore, for MSTVT to develop and implement a comprehensive rehabilitation programme in order to improve the state of the infrastructure in the Ministry and enhance the morale of the workers and trainees.

(xiii) Poor Information Management System

MSTVT has generated and received a lot of information in support of its administrative and other functions from the time it was established. These records are necessary for effective decision making and serve as an institutional memory among many other uses. However, MSTVT is unable to benefit fully from this wealth of information because it is poorly managed, resulting in loss and difficulties in retrieving the records. There is need, therefore, for MSTVT to establish a modern information management system to enhance information management in the Ministry.

(xiv) Lack of Effective Policy Implementation Monitoring Mechanisms

MSTVT has developed a number of policies including the Technical Education, Vocational and Entrepreneurship Training Policy aimed at guiding operations in the sector. These policies are being actively implemented by the

Ministry and other players in the sector. However, absence of effective policy implementation monitoring mechanisms has made it difficult for MSTVT to effectively evaluate the impact of these policies. There is need, therefore, for MSTVT to develop and implement effective policy implementation monitoring mechanisms to enable it evaluate its performance.

(c) Opportunities

A number of positive factors (opportunities) exist in the environment that MSTVT could take advantage of in order to reduce, if not completely eliminate the weaknesses highlighted above and fully implement its revised Strategic Plan. The opportunities include the following:

i) Growing Informal Sector

The informal sector in the country has been growing rapidly as the formal sector continues to shrink due to various reasons including implementation of IMF and World Bank inspired and sponsored austerity measures. Small scale industries constitute a major component of informal sector activities which could provide a ready market for the skills training provided and technologies developed and adopted in the country by MSTVT. These technologies are likely to be relatively cheaper than those available on international markets and therefore affordable to informal sector operators. There is need, therefore, for MSTVT to work closely with informal sector operators to enable it identify their technology needs and develop and adopt appropriate technologies for the informal sector.

(ii) Community and Local Industry Participation in the Provision of Training

As part of the restructuring process, MSTVT has established Management Boards comprising membership from the community and local industry to run the operations of training institutions under the Ministry. This has enabled the community and local industry to be directly involved in running the affairs of training institutions. MSTVT should take advantage of the establishment of Management Boards to ensure that the training provided is of high quality and relevant to the needs of the community and local industry. In addition MSTVT should take advantage of this development to devote its energies and other resources to other priority areas such as R&D in the development, adoption and application of science and technology for local consumption.

(iii) Support from Stakeholders

MSTVT receives a lot of support from its stakeholders which includes financial assistance, approval of its various programmes and active involvement in the decision making process and programme implementation. The Ministry should take advantage of this support from stakeholders to complete the remaining aspects of the reform process and enhance its performance. In addition, the Ministry should develop and implement mechanisms that will facilitate meaningful and coordinated harnessing of the support from stakeholders.

(iv) Donor goodwill

MSTVT requires adequate resources for it to promote the development and application of science and technology and to provide quality and relevant technical education and vocational and entrepreneurship training. There is currently good will from donors to support the operations of the Ministry. MSTVT should take advantage of this donor support and ensure effective utilisation of and accountability for any assistance received.

(d) Threats

Besides the positive factors that MSTVT can take advantage of, there are negative factors (threats) in the external environment that may militate against the successful implementation of the revised Strategic Plan. These include the following:

(i) Continued poor salaries and Conditions of Service

MSTVT, like any other Government Ministry, is faced with the problem of poor salaries and conditions of service. This has tended to demoralise officers, affecting their performance. There is need for Government to critically review the situation in order to improve the performance of officers. In addition MSTVT should identify and implement incentives that can motivate its employees, such as linking labour-day awards and granting of vacation leave and the various types of loans to the performance of employees.

(ii) Inadequate and untimely funding

The continued poor performance of the economy presents a major threat to the operations of MSTVT. Over time, the operations of the Ministry have been severely affected by untimely and inadequate funding caused mainly by the weak Government resource base resulting from the poor performance of the

economy. MSTVT may continue to experience inadequate and erratic funding from the Treasury as the economy continues to perform poorly. There is need for MSTVT to explore other possible ways and means of mobilising additional resources to supplement Government funding.

(iii) Government Liberalisation and Decentralisation Policies

The liberalisation of the economy has increased the number of private investors in the economy who prefer international technologies to those that are developed locally by MSTVT. In addition, many private investors are not interested in supporting public R&D institutions.

The decentralisation policy of the Government has led to the establishment of Management Boards to run public training institutions. Despite the many advantages offered by this approach, it has brought a number of problems including inability of some Boards to provide quality and visionary leadership to their institutions and conflict of interest between the Boards and MSTVT.

It is imperative that MSTVT sensitises private investors on the importance of supporting local R&D institutions in order to achieve sustainable socio-economic development. In addition MSTVT should provide incentives to the private sector to encourage them to support local R&D initiatives. To minimise the negative impact of decentralisation of the running of public training institutions, MSTVT should develop and implement a comprehensive induction and re-orientation programme for members of the various management boards. Furthermore, the Ministry should develop and implement monitoring mechanisms to ensure adherence to established standards by the various training institutions under management boards.

(iv) Low Priority Accorded to Science and Technology by Government

Government has accorded science and technology low priority despite realising that it is a vehicle to national development. This has resulted in low levels of funding allocated for the development and application of science and technology and a fragmented institutional framework for R&D, making it difficult to coordinate the various public institutions involved in the development and application of science and technology. There is need, therefore, for Government to prioritise science and technology in terms of funding and institutional capacity building if the sector has to contribute positively to the sustainable socio-economic development of the country. Government should also streamline the institutional framework

for coordinating R&D to minimise duplication of effort and the thin spread of the meagre resources.

(v) HIV/AIDS Pandemic

MSTVT has not been spared from the negative impact of the HIV/AIDS Pandemic which is prevalent in the country. The pandemic poses a threat to the delivery of quality services by the Human Resources in the Ministry. This is as a result of loss of experienced and qualified personnel due to illness and subsequent death as well as lost man hours due to sickness and other incidental factors. There is need for MSTVT to mount vigorous HIV/AIDS awareness campaigns to minimise its devastating effects on the performance of the Ministry.

2.3 Clients and Their Needs

In the light of the foregoing, key clients of MSTVT and their needs that it is expected to address in the next five years have been reviewed as follows:

i) Training Providers

Training providers expect MSTVT to:-

- Provide policy guidelines, legal framework, pedagogical support, capacity building, quality assurance mechanism, consultancy and certification services; and
- Undertake curriculum development.

ii) Industry

Industry expects MSTVT to:-

- Facilitate linkages with R&D institutions and training providers and institutions, access to financial resources, markets and legal services; and
- Provide skilled human resources, tax incentives, technological innovations, policy and legal framework, consultancy services, qualification framework, common user facilities, personalised training, access to financial resources, Information, packaged technologies and Petty Patents.

iii) Trainees

Trainees expect MSTVT to:-

- Provide quality training, accreditation, career guidance, conducive learning environment, financial support, HIV/AIDS counselling, and clear progression path (qualification framework); and
- Facilitate Job placement and industrial attachment.

iv) Community

The community expects MSTVT to:-

- Provide training opportunities, appropriate technology and information on TEVET and science and technology;
- Produce quality products; and
- Ensure equity in the provision of services.

v) R&D Institutions

R&D institutions expect MSTVT to:-

- Provide a policy and legal framework, financial support and Patents protection;
- Undertake advocacy, promotion activities and collaborative research; and
- Facilitate capacity building, direction in research (agenda) and linkages with industry and training providers.

vi) GRZ

Government expects MSTVT to:-

- Provide qualified human resources, effective R&D services, information, productivity benchmarks in science and technology/TEVET;
- Contribute to Improved socio-economic development; and
- Advise on R&D and skills training.

vii) Agriculture and Other Sectors

The agricultural industry expects MSTVT to:-

- Provide R&D services, skills training, science and technology products, and biotechnology for increased productivity; and
- Facilitate improvement of soil conservation and fertility.

viii) Statutory Bodies

Statutory bodies expect MSTVT to:-

- Provide policy guidance, information, legal framework, financial support;
- Undertake advocacy activities; and
- Facilitate linkages with regional and international organisation.

2.4 Strategic/Core Issues

In addition to identifying the Strengths, Weaknesses, Opportunities and Threats as well as the clients of MSTVT and their needs, two strategic/core issues have been identified which should be addressed if MSTVT is to build a scientific and technological base that will contribute effectively to improved productivity and sustainable growth of the national economy . The following have been identified as strategic/core issues for MSTVT:-

(a) Lack of a National Agenda on Science and Technology

Despite Government realising the importance of science and technology as critical factors in achieving sustainable national socio-economic development and improved quality of life, no attempts have been made to develop and implement a national agenda on this important portfolio. This has impacted negatively on the sector since lack of a national agenda has resulted in a haphazard and fragmented approach in the development and application of science and technology in the economy. There is urgent need, therefore, for MSTVT to initiate and facilitate the development and implementation of a national agenda on science and technology in the country. Some of the issues the national agenda should address include:

- Lack of a policy framework on how the country should deal with new and emerging technologies;
- Absence of a national policy on information and communication technology,
- Lack of coordinated research and development; and
- Lack of a technology policy in the country.

(b) Limited Mandate of the Ministry

The current mandate for MSTVT restricts it to the provision of training up to semi-professional level and does not embrace all R&D activities in science and technology. This has prevented the Ministry from undertaking training activities aimed at producing highly skilled human resources in science and technology at degree level. In addition, the narrow scope of the Ministry in science and technology has led to the thin spread of

this function across various government Ministries and institutions, making effective coordination of R&D activities difficult and resulting in the thin spread of resources for this function. This has reduced the impact of these resources. There is need, therefore, for government to review the mandate of MSTVT to enable it provide training beyond semi-professional level and be responsible for all R&D activities in science and technology.

3.0 MISSION STATEMENT

3.1 It is against this background, therefore, that the mission statement for MSTVT has been revised as follows:

“To effectively facilitate and promote the development and application of science and technology; and provision of technical, vocational and entrepreneurship skills for sustainable national economic growth and improved quality of life”

3.2 Through this revised mission statement, MSTVT will provide and monitor , coordinate and evaluate the implementation of an appropriate operational framework to ensure the development and application of science and technology and the provision of quality and relevant technical education, vocational and entrepreneurship training necessary for sustainable national economic growth and improved quality of life.

3.3 The political and administrative leadership in the Ministry will be responsible for ensuring the successful achievement of this statement. Consequently, they will be expected to provide effective and visionary leadership and mobilise sufficient resources to enable full implementation of the revised Plan by specialised departments in the Ministry and other stakeholders. They will also ensure that accurate information on performance against the Plan is kept and regularly disseminated to relevant stakeholders.

4.0 GOAL STATEMENT

4.1 In support of the revised mission statement, and to give MSTVT specific focus and direction in the next five years, the goal statement has been revised as follows:

“To strengthen capacities for the national development and application of science and technology, and for the provision of skilled human resources for improved productivity and quality of life”

4.2 Through this revised goal statement, MSTVT will develop and implement programmes that will enable strengthening of capacities for the

development and application of science and technology and the provision of skilled human resources in the country in consultation with stakeholders.

5.0 OBJECTIVES, STRATEGIES AND OUTPUT INDICATORS

5.1 To realise the goal for MSTVT, the following objectives with their corresponding strategies and output indicators have been developed:

5.2 Objective 1: To develop diversified curricula in order to provide skilled human resources for increased productivity in the formal and informal sectors.

5.2.1 Strategies

- i) Review existing curricula in consultation with stakeholders;
- ii) Revise and re-enforce standards, and
- iii) Facilitate the development and implementation of national curricula.

5.2.2 Output Indicators

- i) Revised National Curricula in use by 2003;
- ii) Improved Training Standards enforcement mechanisms in place by December 2003; and
- iii) Diversified National curricula developed and in use by 2004.

5.2.3 Through this objective and associated strategies, MSTVT will take a proactive approach and consult widely with relevant stakeholders for the purpose of developing curricula that reflect the needs of the labour market. In addition, MSTVT will undertake regular reviews of the curricula and standards and effectively enforce them to ensure that the training provided by the Ministry meets the changing demands of the labour market.

5.3 Objective 2: To rehabilitate and improve existing facilities in institutions in order to enhance Research and Development and the provision of quality training.

5.3.1 Strategies

- i) Develop and implement preventive maintenance plan;
- ii) Facilitate rehabilitation of facilities;
- iii) Provide tools and equipment;
- iv) Monitor the utilisation of tools and equipment, and
- v) Evaluate the impact of preventive maintenance plan and the tools and equipment.

5.3.2 Output Indicators

- i) Preventive maintenance programme developed and implemented by December 2003.
- ii) All institutions rehabilitated by December 2007, and
- iii) Essential tools/equipment procured and distributed by 2007.

5.3.3 Through this objective and associated strategies, MSTVT will develop a comprehensive and prioritised rehabilitation programme that will cover all the public institutions in the Ministry and mobilise resources necessary for its successful implementation. It will also put in place a flexible and comprehensive preventive maintenance scheme that will ensure that facilities in training and R&D institutions are kept in good condition.

5.4 Objective 3: To effectively manage and develop human resources for the efficient and effective performance of the ministry.

5.4.1 Strategies

- i) Employ qualified staff;
- ii) Enforce occupational standards for TEVET and Science and Technology;
- iii) Provide amenities for staff and students;
- iv) Implement performance management systems; and
- vii) Develop and implement training plans.

5.4.2 Output Indicators

- i) All key positions filled by 2003;
- ii) Standard lecturer/student and researcher/technician ratio achieved by 2007;
- iii) Recreation facilities and health standard safety programmes developed and implemented by 2003;
- iv) Performance Management Package (PMP) institutionalised by 2003;
- vi) Training plan prepared and implemented by 2003;
- vii) Number of staff trained in relevant fields annually.

5.4.3 Through this objective and associated strategies, MSTVT will develop and implement programmes and activities that promote efficient utilisation and development of human resources in the Ministry necessary for effective and efficient implementation of the revised Strategic Plan.

5.5 Objective 4: To develop a National Qualification Framework in order to ensure coherence in qualification.

5.5.1 Strategies

- i) Establish National Qualification Framework in consultation with key stakeholders.

5.5.2 Output Indicators

- i) National Qualification Framework developed and operational by 2007.

5.5.3 Through this objective and associated strategies, MSTVT will ensure that a relevant national qualification framework is developed and regularly reviewed in order to facilitate accreditation of prior learning of trainees, establishment of equivalent qualifications and standardisation of training.

5.6 Objective 5: To construct infrastructure for institutions that are operating in temporally premises and training and science and technology institutions in order to provide quality services.

5.6.1 Strategies

- i) Facilitate construction of infrastructure.

5.6.2 Output Indicators

- i) Six (6) new institutions constructed by 2007.

5.6.3 Through this objective and associated objectives, MSTVT will develop an infrastructure construction programme and mobilise necessary resources for its implementation to ensure that at least six (6) institutions operating in temporally premises are provided adequate and modern accommodation.

5.7 Objective 6: To promote the application of Science and Technology to enhance protection of the environment, improve quality of goods and services and enhance national productivity and competitiveness.

5.7.1 Strategies

- i) Provide incentives for cleaner production processes;
- ii) Provide information on technologies for recycling of materials;
- iii) Advocate for tax and other incentives for industries using bio-degradable materials;
- iv) Facilitate establishment of venture capital fund;
- v) Advocate for enforcement of products standards by Zambia Bureau of Standards; and

- vi) Facilitate adoption of locally and foreign packaged technologies for use by entrepreneurs.

5.7.2 Output Indicators

- i) Increased adoption of cleaner production processes;
- ii) Increased recycling of materials;
- iii) Reduced pollution and environmental degradation;
- iv) Increased use of bio- degradable materials in the processing industry;
- v) Increased volume of sales for locally produced goods;
- vi) Increased exports; and

- vii) Increased adoption of technologies.

5.7.3 Through this objective and associated strategies, MSTVT will take a proactive role in the promotion of the application of science and technology in the country by developing and implementing a prioritised science and technology application promotion programme in consultation with relevant stakeholders.

5.8 Objective 7: To strengthen the enforcement of standards in the provision of skills training and development and application of science and technology to ensure quality control.

5.8.1 Strategies

- i) Enforce TEVET Act effectively;
- ii) Review Science and Technology Act No. 26 of 1997;
- iii) Review the organisation structure of NSTC;
- iv) Strengthen the TEVETA inspectorate;
- v) Review inspection regulations;
- vi) Publish standards annually;
- vii) Conduct follow up studies annually;
- viii) Conduct tracer studies every three years;
- ix) Facilitate capacity building of the National and Satellite Metrology laboratories; and
- x) Develop and implement an accreditation programme and system for laboratory facilities; and

5.8.2 Output Indicators

- i) Science and Technology Act No. 26 of 1997 reviewed by December 2003.
- ii) The organisation structure of NSTC reviewed by December 2003;
- iii) Inspection schedules prepared and implemented annually;
- iv) Inspection regulations reviewed annually;
- v) Standards published annually;
- vi) Follow up and tracer studies conducted by December 2007;
- vii) Strengthened national and satellite metrology laboratories in

- Place by December 2007;
- viii) Accredited laboratory facilities available by December 2007; and
- ix) Accreditation system for laboratories and other facilities in place by December 2005.

5.8.3 Through this objective and associated strategies, MSTVT will draw on regional and international practice and experience, and consult its stakeholders in order to develop and effectively enforce modern and acceptable standards in the provision of skills training and the development and application of science and technology in the country to meet national requirements.

5.9 Objective 8: To establish and maintain a systematic consultative mechanism within the TEVET and Science and Technology Sectors in order to promote coordination and enhance exchange of information.

5.9.1 Strategies

- i) Set up consultative Committees;
- ii) Establish consultative forum; and
- iii) Establish mechanism for exchange of information.

5.9.2 Output Indicators

- i) Industry/Institutional consultative committees established and operational by December 2003;
- vi) Consultative forum for the Ministry and Management Boards established and operational by 2003;
and
- iii) Regular flow and exchange of information.

5.9.3 Through this objective and associated strategies, MSTVT will establish effective consultative mechanisms that will promote synergy in resource mobilisation and utilisation as well as in programme implementation among the various players in the TEVET and science and technology sectors for effective and efficient performance.

5.10 Objective 9: To establish and maintain an integrated Information Management System (IMS) for effective decision making and dissemination of up-to-date information.

5.10.1 Strategies

- i) Develop and maintain a comprehensive data base and retrieval systems; and
- ii) Set up institutional framework for publication of activities and sector's performance.

5.10.2 Output Indicators

- (i) Comprehensive and integrated database in place and operational by December, 2005;
- (ii) Improved access and retrieval of information; and
- (iii) Timely publications of Science and Technology and TEVET activities.

5.10.3 Through this objective and associated strategies, MSTVT will take deliberate steps to generate, maintain and provide accurate, relevant and current information on science and technology , technical education and vocational and entrepreneurship training and on its operations in general to its clients and stakeholders using modern information technologies.

5.11 Objective 10: To develop a focused national agenda for science and technology in order to promote science and technology as a catalyst for national development.

5.11.1 Strategies

- i) Set up a committee to spearhead advocacy for a national agenda on Science and Technology and review MSTVT Portfolio;
- ii) Establish venture capital fund; and
- iii) Advocate for incentives for industries applying locally developed science and/or adapted technologies.

5.11.2 Output Indicators

- i) National agenda on Science and Technology in place by December 2003;
- ii) Cabinet Memorandum prepared by June 2003;
- (iii) Portfolio of the MSTVT reviewed by December 2003;
- (iv) A Cabinet Committee on Science and Technology in place by October 2003;
- (v) Venture capital established by December 2004; and
- (vi) Increased application of science and technology by December 2004.

5.11.3 Through this objective and associated strategies, MSTVT will ensure that all legal, policy and administrative issues that deter the effective development and utilisation of science and technology as a catalyst for national development are resolved and science and technology takes a centre stage in the country's socio-economic development.

5.12 Objective 11: To encourage increased participation of women and other disadvantaged groups in technical education, and vocational and entrepreneurship training and in science and technology in order to promote equity.

5.12.1 Strategies

- i) Support initiatives aimed at encouraging the participation of women in science and technology and training;
- ii) Establish a bursary Scheme for females and disadvantaged groups.
- iii) Sensitise women and other disadvantaged groups to participate in science and technology and technical training;
- iv) Undertake science and technology career promotion and advocacy campaigns;
- v) Facilitate trained women entrepreneurs' access to credit; and
- vii) Facilitate vocational skills training for persons with special needs.

5.12.2 Output Indicators

- i) More women and disadvantaged groups participating in science and technology activities;
- ii) Increased number of women and disadvantaged groups scientists and technologists;
- iii) Increase in the number of trained women and disadvantaged groups entrepreneurs; and
- iv) Increased number of persons with special needs accessing training.

5.12.3 Through this objective and associated strategies, MSTVT will develop a comprehensive programme to promote the participation of women and other disadvantaged groups in Technical Education, Vocational and Entrepreneurship Training and in science and technology and mobilise resources necessary for its successful implementation and sustainable quality of training.

5.13 Objective 12: To review and monitor the implementation of policies on science and technology, technical education, and vocational and entrepreneurship training in order to ensure attainment of policy objectives.

5.13.1 Strategies

- i) Review Science and Technology Act and Policy;
- ii) Review TEVET Policy and Act;
- iii) Enhance liaison with sector ministries on policies on science and technology and vocational training;
- iv) Provide a mechanism for the operationalisation of ICT Policy; and
- v) Bio-technology and bio-safety Policy developed and operationalised by December 2004;.
- vi) Develop and implement a policy monitoring mechanism and evaluate impact.

5.13.2 Output Indicators

- i) Science and Technology Policy and Act reviewed by June 2003;
- ii) TEVET Policy and Act reviewed by June 2003;
- iii) Sector policies harmonised by December 2005;
- iv) ICT Policy developed and operationalised by 2004; and
- v) Biotechnology and bio safety policy operationalised by 2004.

5.13.3 Through this objective and associated strategies, MSTVT will ensure that the legal and policy framework for its mandate is reviewed and strengthened in line with relevant changes in the environment. It will also ensure that effective mechanisms for implementing the revised legal and policy framework are developed and implemented.

5.14 Objective 13: To provide efficient and effective administrative and support services in order to facilitate the smooth operations of the ministry.

5.14.1 Strategies

- i) Develop and implement an efficient administrative mechanism; and
- ii) Expedite the restructuring of the Ministry.

5.14.2 Output Indicators

- i) Timely and adequate provision of internal funds, materials, supplies, transport and other logistics; and
- ii) New structure operational by January 2003.

5.14.3 Through this objective and associated strategies, MSTVT will ensure that resources necessary to effectively implement the revised Strategic Plan are mobilised and utilised in a prioritised and transparent manner.

6.0 PRE-CONDITIONS

6.1 For the revised Strategic Plan to be implemented successfully, certain conditions must be in place. These include:-

- Continued political goodwill and support;
- Availability of timely and adequate funding, including capital funding;
- Availability of adequate and qualified human resources;
- Availability of adequate transport;
- Co-operation from stakeholders and clients;
- Improved salaries and conditions of service;
- Acceptance and ownership of the Strategic Plan by key stakeholders;
- Stability at political and managerial levels;
- Continued peace and stability in the country and region;
- Staff awareness of and commitment to the Strategic Plan;
- Linking of the Strategic Plan to the budgeting process;
- Staff commitment to documenting accurate and comprehensive performance information.
- Availability of technical and financial assistance from cooperating partners.
- Willingness of women and other disadvantaged groups to participate in science, technology, technical education, and vocational and entrepreneurship programmes.

7.0 GENERAL ASSUMPTIONS

7.1 The revised Strategic Plan has provided the mission, goal, objectives and strategies as well as the output indicators for MSTVT for the period 2003-2007. It has also provided an analysis of the complex and dynamic environment in which the Ministry is operating and its associated challenges. Furthermore, the revised Plan has outlined Government's overall macro-economic policy framework, national priorities and the internal factors that may affect its operations during the period.

7.2 The successful implementation of this Strategic Plan is, therefore, based on the following general assumptions:-

- a) MSTVT will own the revised Strategic Plan and actively pursue its implementation;
- b) MSTVT will exhibit total organisational commitment which is critical to the successful implementation of the Strategic Plan;
- c) MSTVT will endeavour to apply the limited resources to key priority areas in order to achieve effective and efficient implementation of the Strategic Plan. This will be necessary given the fact that finances are likely to continue to be a constraining factor in the Public Sector;

- d) Development of a new positive organisational work culture, such as work planning, target setting and performance recording and monitoring is a must to support the implementation of the Strategic Plan;
- e) MSTVT will be operating on the basis of the new structure. This is important because it will provide the necessary chain of command and the human resources needed to effectively implement the revised Strategic Plan; and
- f) Continued support and co-operation from clients and stakeholders.

8.0 LINKING THE STRATEGIC PLAN TO THE BUDGETING PROCESS

- 8.1 Various resources will be required in order for MSTVT to effectively implement the Strategic Plan. These resources can only be obtained through prudent budgeting. It is imperative, therefore, that the MSTVT links its Strategic Plan to the Government budgeting process by developing annual work plans on the basis of the Strategic Plan and linking these to Government annual budgeting system under the Ministry of Finance and National Planning. This will work to enhance the Activity-Based Budgeting (ABB) that has been adopted by the Government.
- 8.2 The implementation of the Strategic Plan will need to be constantly monitored and performance reports on the various aspects of the Plan periodically prepared and discussed to inform the next course of action. These performance reports will provide evidence for value-for-money and serve as inputs into decisions and processes, including the next round of strategic planning in the year 2008.