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CERTIFICATION

I certify the content of the study project (thesis) to be my own and original work and that all sources have been accurately reported and acknowledged, and that this document has not previously been submitted in its entirety or in part at any educational establishment.

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BUSINESS PLANNING AND STRATEGIC MANAGEMENT MODEL OF THE NATIONAL BOTANICAL RESEARCH INSTITUTE (NBRI)

A Study Project presented to the
Graduate School of Business of the
University of Stellenbosch

in partial fulfilment of the requirements for the
degree of Master of Business Administration

by
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Degree of confidentiality: B 31 August 2003

DECLARATION

I, J.J. Coetzee, declare that this project is my own original work and that all sources have been accurately reported and acknowledged, and that this thesis has not previously in its entirety or in part been submitted at any university in order to obtain an academic qualification.

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ABBREVIATIONS AND ACRONYMS

CBD	Convention on Biological Diversity
CCD	Convention to Combat Desertification
CITES	Convention on International Trade in Endangered Species of Wildlife Fauna and Flora
DART	Directorate of Agricultural Research and Training
FAO	Food and Agricultural Organisation of the United Nations
FCCC	Framework Convention on Climate Change
FSRE	Farming Systems Research and Extension
GIS	Geographical Information System
GTZ	*Deutsche Gesellschaft für Technische Zusammenarbeit*
KPI	Key Performance Indicator
MAWRD	Ministry of Agriculture, Water and Rural Development
NAP	National Agricultural Policy
NARP	National Agricultural Research Plan
NAS	National Agricultural Strategy
NBRI	National Botanical Research Institute
NBGN	National Botanical Garden of Namibia
NDP1	1st National Development Plan
NDP2	2ND National Development Plan
NPGRC	National Plant Genetic Resources Centre
OPM	Office of the Prime Minister
PEST	Political, Economical, Social And Technological
PPD	Plant Product Development
SADC	Southern African Development Cooperation
SCM	Supply Chain Management
SWOT	Strengths, weaknesses, opportunities and threats
TOC	Theory of Chaos
UK	United Kingdom
VEU	Vegetation Ecology Unit
WIND	National Herbarium of Namibia
ZOP	*Zielorientierte Projekt Planung*

ABSTRACT

This business and strategic management model for the National Botanical Research Institute (NBRI) was developed within the framework of the Strategic Plan of the Ministry of Agriculture, Water and Rural Development of the Government of Namibia and the Business Plan of the Directorate of Agricultural Research and Training, through a series of in-house workshops and meetings.

The Southern African Botanical Diversity Network (SABONET) Project provided additional financial support to finalise the Business Planning process, underscoring a commitment to capacity building and empowering of botanical institutes within the Southern African region. The Business Plan clearly sets out in operational terms what must be done over the next 12-month period to attempt to achieve the overall mission of the NBRI.

The model was tailored to meet the unique needs of the NBRI. Various analysing techniques were considered as part of the critical analyses. Issues that were identified were limited to only ten per Balanced Score Card area. This was done so as not to over-commit staff.

The process was comprehensive and thorough and laid the foundation for ongoing changes as anticipated in the recommendations. Development of people, processes and systems were combined and integrated during a two-year period. The relatively long period allowed for the changing of people's attitudes and mindsets and coping with new issues. Sustainable change is embedded in the strategies that were already implemented. Momentum needs to be maintained on a continuous basis to make change management part of the new culture and not to revert back to old ways. Total integration of people, processes and systems will be possible when individual performance and remuneration are linked to the Balanced Score Card system. Integration of organisation and individual performance will be a quantum leap for the NBRI.

The business planning process will enable the NBRI to adapt to changes at an increased pace. Providing that a number a critical success factors are managed, which include the retention of quality and committed people, the NBRI has the potential to be the leading

institution in the Public Sector with regard to change management and practising innovative business processes.

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CHAPTER 1
INTRODUCTION AND PROBLEM STATEMENT

1.1 INTRODUCTION

The National Botanical Research Institute (NBRI) is a subdivision within the Directorate of Agricultural Research and Training (DART) of the Ministry of Agriculture, Water and Rural Development (MAWRD) of the Government of Namibia. Established in 1953 as the South West Africa Herbarium, the institute has expanded since Independence in 1990 to include the following sections:

- National Herbarium of Namibia (WIND)
- National Plant Genetic Resources Centre (NPGRC)
- Vegetation Ecology Unit (VEU)
- National Botanic Garden of Namibia (NBGN)
- MAN Müller Reference Library
- Plant Product Development is planned and staff need to be recruited, see Appendix A for the Organisational Structure.

The NBRI is recognised as a regional centre of excellence for botanical research, and is currently involved as a partner in several international initiatives. In addition, the NBRI backstops various line ministries and other national stakeholder groups from a botanical perspective.

Recognising the need for a proactive approach, the NBRI requested the Consultancy Services Division of the Office of the Prime Minister (OPM) to facilitate the strategic/business plan drafting process with the aim of making the institute more focused and functional. The process started during the first quarter of 2001, and six one-day workshops were conducted with inspiring participation and commitment from staff. When the author left the OPM end of January 2002, a number of reasons contributed to a lapse in the momentum of the process. During November 2002, the NBRI approached the author to assist with the completion of the Business Plan and the Project Research Criteria. The latter developed as part of the process of quantifying the demand and internal capacity of the NBRI, and was not part of the original Terms of Reference, see attached Appendix B.

During the business planning process, staff indicated that:

- The institute is marginalised in the planning and management of the MAWRD
- Customer issues are of paramount importance for the survival of the NBRI, with specific mentioning of a customer refocus strategy
- The institute wants to improve its performance.

1.2 PROBLEM STATEMENT

The purpose of the study was to develop a business planning and strategic management model for the NBRI. The model was developed and refined over a period of two years, April 2001 until April 2003.

The purpose of the first Business Plan of the NBRI is to:

- Outline how the institute is responding to Issues and strategies in the MAWRD Strategic Plan
- Provide operational direction to the staff that will enable the planning and execution of needs-driven, appropriate activities.

The plan lays the foundation for planning in the subdivision and seeks to identify:

- Strategic factors
- Internal and external elements that determine operations and management thereof
- The process by which policies and strategies will be put into action
- Ways through which subdivisional activities and performances will be compared with desirable performances.

1.3 SCOPE

Scope is the breadth or narrowness of the class of phenomena to which a concept applies, Mouton (1998: 118). The scope of this study covers the development of a model for business planning and strategic management for the NBRI.

1.4 METHODOLOGY

The author facilitated the process of developing and refining of the model. The staff of the NBRI developed the plan, thus ensuring buy-in, ownership and sustainability of the planning process.

The project started with information gathering, followed by a workshop aimed at reviewing high level statements namely; the mission, objectives and core values; and issue identification and strategy formulation.

The process continued with articulation of issues and the development of appropriate options for agreed issues through a series of meetings and workshops. The project also put into place measures and ways for evaluation and control of the processes and operations of the subdivision, thus ensuring desired outcomes.

The final output was the drafting of the Business Plan, in line with preparatory work and planning framework during the series of eight workshops, the first six during 2001 and one during early 2003.

In conclusion, the author applied the following methodology:

- Facilitation and group discussions
- Perusal of primary and secondary documentation
- Interviews with customers
- Observations
- Websites
- Weighting and ranking
- Probability analysis
- Plan, do, check and act
- Report writing
- Evaluation.

CHAPTER 2
LITERATURE REVIEW

2.1 STRATEGIC MANAGEMENT

Strategic management can be defined as the set of decisions and actions resulting from the formulation and implementation of strategies designed to achieve the objectives of an organisation:

- The formulation of a strategy. See Appendix C for the Strategy Formulation Process.
- The implementation of a strategy, Smit and De Cronje (1995: 107).

Swanepoel, Erasmus, Van Wyk and Schenk (2000: 202) refers to strategic management as the process of examining both present and future environments, formulating the institution's objectives, implementing and controlling decisions focused on achieving these objectives in the present and future environments.

Strategic management refers to the managerial process of:

- Forming a strategic vision
- Setting objectives
- Crafting a strategy
- Implementing and executing the strategy
- Initiating over time whatever corrective adjustments in the said mentioned interlinked process is appropriate (Thompson and Strickland, 2001: 6).

Strategic management is about three questions:

- Who is the enterprise (mission statement as the reason for existence and operating values)?
- What is the enterprise doing (current corporate, business and operational objectives)?
  See Appendix D for the Strategy Pyramid.
- Where is the enterprise going (vision statement and proposed appropriate strategies)?

Strategic management is to enable developing and executing high-level statements:

- Vision
- Mission
- Objectives
- Operating values, Coetzee (2001).

Strategic management includes strategic planning. In terms of a broader definition of strategy, focus should be given to corporate culture.

Strategic management includes:

- Leadership
- Culture management
- Operating values
- Productivity
- Team work
- Motivation.

2.2 PLANNING THEORIES

The concept of planning is central to this study. Thus, in order to gain an understanding of planning, it is essential to focus on the development of planning theories. The roots of planning theory extend back hundred of years and are directly and indirectly linked to many concepts in planning.

Five major planning theories emerged:

- Rationalism
- Pragmatism
- Socio-Ecological Idealism
- Political-Economic Mobilisation
- Communications and Collaboration, Lawrence (2000: 608).

2.2.1 Rationalism

Rationalism has been a central theme in western thinking since the Greeks identified

reason as a ‘superior human characteristic’. By the 1960s, the process had been refined with the following:

- The addition of a problem
- Need or opportunity
- Goals
- Objectives
- Criteria
- Generation and evaluation of alternatives
- Links to implementation.

2.2.2 Pragmatism

Pragmatism is a normative planning theory that is founded on knowledge-based experience that should guide the planning action. This theory involves negotiation and bargaining among a plurality of competing interests and values. The process tends to be supported by practice and experience-orientated studies and analyses and is characterised by the following:

- Efficiency
- Adaptability
- Relevance
- Realism.

2.2.3 Socio-Ecological Idealism

This theory seeks to reintegrate social and environmental substance into the planning process. Idealism refers to persuasive power of an idea or set of ideas to transform individuals, organisations and society. This humanistic perspective in planning has been reinforced by focusing on interpersonal relations; and a more organic and less mechanic and hierarchical image of organisation.

The humanistic orientation of the 1970s in the socio-ecological idealism has since been counterbalanced by the perspectives and values of environmentalism. Planning is more than the physical environment. The socio-ecological idealism has been broadened to address relationships amongst human built natural environments and to integrate environmental values and ethics.

This theory is visionary, value-full, creative and substantive. The theory recognises the value of integrating the following images into planning:

- Holistic
- Organisational
- Environmental
- Societal.

2.2.4 Political-Economic Mobilisation

This theory is a reaction against the lack of substance with the rationalism theory. Advocacy, the earliest form of political-economic mobilisation theory, drew upon:

- Pluralism
- Historical concerns
- Social reform planning.

2.2.5 Communications and Collaboration

This theory is a reaction against planning as a unitary endeavour. Planning has got a collaborative component.

Assumptions associated with this theory are:

- Communications and interactions are central to planning
- Information is embedded in understandings, practices and institutions
- Theory and practice and processed knowledge are merged.

2.2.6 Applicability on Business Planning and Strategic Management

Planning theory offers the following applications for business planning and strategic management:

- Greater attention to problem definition, generation of options and alternative options for response identification and formulation
- Identification of negative tendencies and artificial assumptions during an early stage for addressing during the planning process
- Various useful techniques for planning in a multi-organisational setting
- Focus on value of holistic socio-ecological visions

- Demonstration of need to systematically analyse and redress structural and procedural inequities linked to the business process
- Communication principles useful for practical facilitation and communications of change
- Demonstration of how values and ethics can be integrated into each planning process and articulated in operating values.

2.3 PLANNING TOOLS

For the purpose of strategic and business planning, the following are planning tools that have been identified from a variety of sources and experience of the author which include the following:

2.3.1 Project and Operational Planning

The following are included:

- Critical risk summary (adjusted for impact of issues)
- Weighting and ranking (applied)
- Probability analyses, historical and future (applied)
- Scenario planning, worst, best and most likely (applied)
- Sensitivity analyses (adjusted for application in impact of issues)
- Gant charts
- Programme Evaluation and Review Technique (PERT)
- Management by Objectives (MBO)
- Social Cost Benefit Analyses
- Critical Path Method (CPM)
- Risk portfolios
- Register of risks or high level risk register
- Time series analyses
- Regression analyses
- Linear programming
- Coefficient of variables
- Process control method
- Decision trees
- Monte Carlo simulation.

2.3.2 Cost Accounting and Financial Management

The following are included:

- Net Present Value (NPV)
- Return on Investment (ROI)
- Modified Internal Rate of Return (MIR), Damodaran (1997: 260-281)
- Expected Net Present Value
- Economic Value Added
- Cost breakeven analyses, Damodaran (1997: 268)
- Activity based costing and direct costing, Horngren, Foster and Datar (1997: 28).

2.3.3 Facilitation and Strategic Planning

The following are included:

- Brainstorming (applied)
- Delphi-technique (applied)
- Strengths, Weaknesses, Opportunities and Threats (SWOT, applied)
- Political, Economic, Social and Technology (PEST, applied)
- Industry Analyses (applied)
- Porter's analyses of Five Competitive Forces (applied), Thompson and Strickland (2001: 74-81)
- Boston square matrix.

2.4 STRATEGIC AND BUSINESS PLANNING

2.4.1 Strategic Planning

Strategic planning is a relatively recent approach to planning that developed after World War II. It provides long-term direction to an enterprise, with its mission as the ultimate aim to achieve long-term strategies, of which the following are apparent:

- Executed by top management
- A time frame of two to three years or more depending on the type of business
- Focus on the business as a whole
- Future orientated
- Requires constant adaptation to the environment
- Provides broad, general guidelines to keep the business on course

- Requires deploying of resources and skills of the organisation with regard to the opportunities and risks in the business environment to steer the business profitably towards attaining its mission, Smit and De Cronje (1995: 91-93).

Strategic planning is the process by which an organisation makes decisions and takes action to enhance its long-term performance. The process consists of the following four stages:

- Strategic analysis, which entails an assessment of the external and internal conditions of an organisation
- Strategy formulation, which entails answering the question: Where does the organisation want to be?
- Strategy implementation, which entails answering the question: How can the organisation get to where it wants to be?
- Strategic control, which entails answering the question: How will the organisation know when it has arrived? Lewis, Goodman and Fandt (1998:155 and 156).

Although a somewhat dated reference, Bryson (1988: 12) provides a very concise circumscription of strategic planning, namely: A disciplined effort to produce fundamental decisions and actions shaping the nature and direction of an organisation's activities within legal bounds.

Strategic planning involves the following eight steps:

- Development of an initial agreement concerning the strategic planning effort
- Identification and clarification of mandates
- Development and clarification of an organisation's mission and values
- External environmental assessment
- Internal environmental assessment
- Strategic issue identification
- Description of the organisation in the future, Bryson (1988: 12-15).

Strategic planning is a systemic, analytical approach that reviews the business as a whole in relation to its environment, with the objective of developing an integrated, co-ordinated and consistent view of the direction the organisation wants to follow, and facilitates the

adaptation of the organisation to environmental change, Coetzee (1999). Strategic planning in the public service is longer term planning, usually three years or more.

Strategic planning has become a common management tool. However, few managers are satisfied with strategy implementation due to the following:

- Misuse of objectives
- Objectives are intertwined with strategy
- The expectation that the planning process will lead to new and improved strategies.

According to Loubser (2003), the following are core capabilities for effective strategy implementation:

- A leadership style that embraces the paradox of top-down direction and upward influence
- Clear strategy and clear priorities
- An effective top team whose members possesses a general management orientation
- Open vertical communication
- Effective coordination
- Down-the-line leadership.

In order to execute strategic planning effectively, the author applied systems thinking due to the following characteristics of this study that involve multiple causation; viz.:

- Multi-dimensional
- Involving different stakeholders
- Interacting with other systemic issues
- Changing over time
- Purpose driven, Dostal (2003: 5).

According to the Consultancy Services Group (1996), three levels of strategic planning can be identified:

- Corporate or ministerial level
- Business Unit/Group or Directorate level
- Functional or operational level, e.g.

  Production

Marketing

Accounting

Engineering

Human resources.

2.4.2 Business Planning

Business planning refers to exactly the same process as strategic planning. It is only for a shorter period, namely, a one-year or annual plan, which includes the process of issue articulation and developing responses, and it is generally less complicated than strategic planning. Business planning could be used interchangeably with functional planning. For example, the seven business plans of the MAWRD could also be regarded as functional plans since they refer to seven distinct business groups or business areas. However, since functional planning is not business-wide and focuses on securing resources for a specific function with less focus on implementing corporate or horizontal strategies, as understood by the term 'business planning', it is more appropriate and contemporary to use the term "business planning" as a replacement for "functional planning".

This study regards the process and benefits of business and strategic planning as interchangeable. Benefits of strategic and business planning for managers are the following:

- Assist in identifying both short and medium term requirements
- Assist in shaping future organisational requirements
- Assist in delivering services within operational constraints
- Deal with external environmental factors and constraints
- Create an environment that is proactive
- Assist in focusing on key issues
- Provide guidance on requirements at every level
- Provide comprehensive management information
- Provide early warning of operating difficulties
- Develop and strengthen the management cadre
- Overcome remoteness problems caused by geographical spread
- Provide a mechanism for achieving improvement
- Enable better management of change

- Improve communication, Consultancy Services Group (2000).

Internal benefits of strategic and business planning for operational staff are the following:

- Enhance performance
- Share organisational aims and objectives
- Clarify the role of every role player and their contribution
- Minimise operating difficulties caused by fragmentation of responsibilities
- Aid in personal development
- Improve job satisfaction.

Organisational benefits of strategic and business planning are the following:

- Help deliver services within constraints
- Secure the organisation's share of decreasing financial resources of government
- Deliver improvements in productivity
- Demonstrate productivity improvements
- Improve financial management system
- Improve accountability, Coetzee (2001).

According to Coetzee (1999), critical success factors for strategic and business planning are the following:

- Commitment of all participants
- Willingness to change
- A sequence of small steps in the right direction
- Realistic and achievable objectives, strategies and targets
- Objective issues formulation
- Appropriate strategies
- Action plan implementation
- Review and adjustments.

Strategic and business planning require change and transformation. Developing strategies and implementing them are the easy part. Changing people and organisational cultures is a painful process.

Kotter (1995: 59-67) identifies reasons for the failure of transformation efforts:

- Not establishing a great enough sense of urgency
- Not creating a powerful enough guiding coalition
- Lacking a vision
- Undercommunicating the vision by a factor of ten
- Not removing obstacles to the new vision
- Not systematically planning for and creating short term wins
- Declaring victory too soon
- Not anchoring changes in the corporation's culture.

2.4.3 Strategic and Business Plan

A Strategic Plan identifies the markets in which an organisation competes as well as the ways in which it competes in those markets, Lewis, *et al.* (1998: 155 - 156). The same definition is applicable to this study, and also to the Business Plan, the main difference being the time- frame as already indicated.

A Strategic Plan is also known as a Ministerial Plan in the public sector and as a Corporate Plan in the private sector. A Business Plan is known alternatively as a Directorate Plan in the public sector.

CHAPTER 3
CONTEXTUALISING PLANNING FRAMEWORK

3.1 VISION 2030

The Right Honourable Prime Minister, Hage Geingob, formulated Vision 2030 in 1996: "To improve the quality of life of all Namibians to the level of developed countries by 2030", National Planning Commission (2001: 1-7).

A task force was formed in 2001 to develop a coordinated national plan as to the implementation of Vision 2030, consisting of the following stakeholders:

- Public sector
- Private sector
- Non-governmental organisations.

3.2 2ND NATIONAL DEVELOPMENT PLAN (NDP2)

The 1st National Development Plan, 1995-2000, was succeeded by the 2nd National Development Plan, 2002-2007. NDP2 provides direction as to the following:

- National objectives
- Sector objectives
- Sector strategies
- Sector targets
- Planned expenditure levels.

3.3 PERFORMANCE AND EFFECTIVENESS MEASUREMENT PROGRAM (PEMP)

PEMP is a cross-sectoral programme under the auspices of the Office of the Prime Minister (OPM) to develop cross-sectoral objectives and targets for the public sector in order to transform and commit the public sector to a performance-orientated and output- and outcome- based performance system.

PEMP aims to integrate the following:

- Prime objectives
- NDP2 targets

- Other measures that could be considered for target setting.
- Political targets
- Ministerial targets
- Management Information needed for management to take informed decisions, PEMP Framework (2000).

3.4 AGRICULTURAL SECTOR PLANNING

3.4.1 National Agricultural Policy (NAP)

The NAP provides policy direction to the agricultural sector. NAP is in the process of revision. NAP provides direction regarding the following issues:

- Role definition of sector players
- Production
- Government services
- Agro- and agri-industrial investment
- Agri-tax
- Marketing.

The NAP contains a number of important policy guidelines, which refer amongst others to:

- Concentration of Government resources on the communal farming sector
- Privatisation of agricultural development services
- Design of a nation-wide credit system
- Decentralisation of research and extension services
- Closure of a number of research stations in favour of on farm research
- Gradual phasing out of agricultural subsidies, National Agricultural Policy (2001).

3.4.2 National Agricultural Strategy (NAS)

The NAS is in the process of review and provides agricultural targets as to:

- Outcome
- Physical
- Institutional and policy
- Financial
- Legislative, National Agricultural Strategy (2001).

3.5 STRATEGIC PLAN OF THE MINISTRY OF AGRICULTURE, WATER AND RURAL DEVELOPMENT (MAWRD)

3.5.1 Outline/framework

The Strategic Plan of the MAWRD, as facilitated by the author, provides a five-year direction (2001-2006) by means of the following:

- High level statements
- Key developments and initiatives
- Management objectives, strategies and targets, focusing on aspects such as delegation, empowerment and participatory management, thus emphasising the human resources and development side of the business that is referred to in the Balanced Score Card as 'Learning and Growth'
- Operational objectives, strategies and targets, focusing on the improvement of efficiency and effectiveness of business processes that includes the functional aspects of the typical line functions
- Financial objectives, strategies and targets, focusing on expenditure and income, dependency on donor funds, the implications of budget cuts across the board, problems with the financial system, procurement process and options as to overcoming the main challenges.

3.5.2 Mission

The MAWRD exists to promote and facilitate the environmentally sustainable development, management and utilisation of water and agricultural resources to achieve sound socio-economic development together with all citizens.

3.6 BUSINESS PLAN OF DIRECTORATE OF AGRICULTURAL RESEARCH AND TRAINING (DART)

The Business Plan of DART, as facilitated by the author, provides annual direction in terms of the following:

- Purpose
- Mission
- Objectives for management, operational and financial areas
- Change objectives as covered under operational area

- Management area, covering planning levels, structure, quality systems and human resources, Business Plan of the Directorate of Agricultural Research and Training (2000).

Each of the management, operational and financial areas covers the following:

- Objectives
- Strategies
- Assumptions
- Resources and costs
- Milestones (similar to targets, milestones are the preferred choice of MAWRD)
- Responsibility.

3.7 BUSINESS GROUP ACTIVITY PLAN

The Action Plan (one year) of the DART was initiated by the MAWRD as an operational plan listing all activities and resources, and provides direction as to the following:

- Objectives
- Strategies
- Activities
- Milestones
- Timing
- Recurrent budget
- Development budget, Business Group Activity Plan (2000).

CHAPTER 4
HIGH LEVEL STATEMENTS AND BUSINESS AREAS

4.1 VISION

Vision is the invisible future utopia of an organisation. According to Taylor (1999), vision describes the basic values and purpose of the organisation, it provides the direction and includes both personal and organisational values. The latter are timeless and are seldom attained, but nevertheless regarded as necessary to guide the strategic thinking and direction of the organisation.

The vision of the NBRI was not articulated during the first Business Plan. However, it will be considered during the second Business Planning Process. The mission provides adequate direction for a governmental organisation within the context of the Strategic Plan of MAWRD. At a later stage, the participants' understanding of the process will have increased, which will enable them to have a better perspective of the planning process and the future.

4.2 MISSION

The mission is the reason for the existence of an organisation and provides direction as to what should be done, 'now' and in the 'future'. The following were used as a guideline for developing the mission statement of the NBRI:

- Sense of direction
- Sense of purpose
- Defines the foundation of the organisation
- Identifies major priorities/direction
- Identifies the owner of the service
- Identifies the customers of the service
- Identifies the constraints on the organisation
- Refers to the organisations values
- Inspirational
- All embracing
- No time scale
- Easy to remember

- Be ambitious, but at the same time achievable
- An organisation to do X by means of Y for the long-term benefit of Z
- May be subdivided into two levels: primary and secondary, Kukuri (2001).

Externally, a mission should focus on the image and uniqueness of an organisation. Internally, a mission should refer to:

- The ultimate purpose of the organisation
- Serve as a reference point
- Inspire better results, Consultancy Services Group (2000).

Originally, four alternative missions were articulated and presented during the first Workshop. One of the missions was adopted and amended, and referred to a project team to make final amendments. During the second Workshop, the refined mission was presented and mutually agreed upon by all team members of NBRI.
The mission of the NBRI is: To promote the understanding, conservation and sustainable use of Namibian plants for the benefit of all.

4.3 OBJECTIVES

Taylor (1999) suggests that objectives should state what is to be achieved, when it is to be accomplished, and what is the acceptable result or quality. Objectives, also known as 'core objectives', provide more specific direction for the future than the mission.

To develop objectives, the following are questions that provide guidance:

- What is expected from the NBRI?
- What are the NBRI set up to do?
- How can success of the NBRI be defined?

The following have been presented as the requirements that objectives should meet:

- Clarity
- Conciseness
- Focus

- Measurable
- Tangible
- Start with: “To…”, see NBRI objectives in following paragraphs
- State the desired objectives of the organisation as a whole
- Should relate to the mission
- Not necessarily function bound
- Should be based on specific, measurable criteria, some areas not possible
- Should contain key areas such as:
    - Value for money
    - Technology/innovation
    - Social responsibility
    - Corporate image
    - Produce quality
    - Employee development/satisfaction
- State objectives to be achieved in the short-term
- Future orientated - should relate to desired state of affairs, something you wish to achieve
- Verifiable by a third party
- Ends, not means, not how will you get there
- Few objectives to enable capability of being kept in mind and attained
- Achievable, stretching, not impossible; and within the organisation’s powers
- Prioritised, allow managers to adapt to change in circumstances, Kukuri (2001).

Four groups were with provided the opportunity to formulate and present objectives. During the presentations it became clear that the NBRI was too much process-orientated, and in this sense unbalanced in favour of the business processes, in which the staff is excelling and complying with international standards of scientific research. The author decided to introduce the Balanced Score Card Approach, to cover not only the Business Process, but, also the Customer Focus, Financial and Learning and Growth areas. This approach, although elementary, was in tandem with the level of understanding of team members of the NBRI.

The objectives of the NBRI are as follows:

4.3.1 Business Process

To collect and maintain plant material and data according to international standards, collaborating with external organisations and programmes where appropriate.

4.3.2 Customers

To provide high quality, efficient services through needs-driven, plant-related research.

4.3.3 Financial

To promote cost awareness and the careful and efficient utilisation of funds.

4.3.3 Learning and Growth

To support training and development of staff.

4.4 OPERATING VALUES

Operating values are also known as core values. In order to be practical and effective, operating values need to be a short list of values. A long list of values tends to cause uncertainty as to the priority thereof and can contribute towards a feeling of vagueness.

According to the Concise Encyclopedic Dictionary (1992: 866) values are: Desirability, usefulness and importance.

Operating values should meet the following requirements:

- Relate to desired state of affairs, something the organisation wishes to be.
- Form an integral part of all objectives
- Contain key areas such as: customers, management and human resources.

The operating values of the NBRI are:

- Professionalism
- Commitment
- Progressiveness.

Operating values articulate the ethos of an organisation, and are a clear indication of the values with which an organisation wants to be associated. Having operating values for the sake of complying with what is required, is senseless. Since Enron, WorldCom and other corporate scandals, a renewed focus has been placed on operating values and the issues of corporate citizenship; social responsibility; and ethics and accountability. In order to live and breathe the operating values effectively in an organisation, the performance of people in the organisation, and especially management, needs to be assessed based on operating values.

4.5 BUSINESS AREAS

The NBRI as a subdivision of the DART do have the following functions:

- Plan, design and conduct inventories of the botanical resources of Namibia
- Undertake research on the vegetation, flora and plant genetic resources of Namibia, in accordance with overall objectives of the Division, Directorate and Ministry
- Collect, collate, capture, analyse and interpret data pertaining to botanical resources
- Prepare and disseminate tangible outputs from research and inventory activities
- Promote the development of indigenous plants with economic potential
- Supply needs-driven botanical information
- Provide a plant identification service
- Curate and maintain national plant collections
- Cultivate awareness and instil appreciation of Namibia's floral heritage
- Collaborate in relevant national, regional and international initiatives, networks and programmes
- Analyse, interpret and advise on international instruments and provide appropriate input when required as a national responsibility of ratification
- Advise, inform and assist MAWRD Management, colleagues and clients on all matters pertaining to plant resources, especially as relating to policy and legislation
- Undertake environmental monitoring through input into review of environmental impact assessments, and research and collecting permits
- Maintain comprehensive botanical reference library as part of National Agriculture and Water Information Centre.

The functions of the Section National Herbarium of Namibia (WIND) are:

- Curate the National Plant Reference Collection
- Conduct inventories of the indigenous flora
- Undertake fieldwork to previously neglected areas to ensure that the National Collection is representative of the Namibian flora
- Undertake biosystematic studies of flagship taxa
- Create, update and manage information databases on the Namibian flora
- Produce and publish an updated English version of the Flora of Namibia
- Maintain literature collection relevant to the taxonomy of Namibian plants
- Provide a plant identification service
- Facilitate the provision of plant material to international experts undertaking *bona fide* taxonomic research
- Provide taxonomic backstopping to the development of plant products
- Analyse floristic information for national development and planning purposes
- Participate in national, regional and international initiatives pertaining to plant taxonomy/biosystematics.

The functions of the Section National Plant Genetic Resources Centre (NPGRC) are:

- Prepare and execute germplasm collecting missions
- Process and store collected and multiplied germplasm
- Curate and maintain national plant genetic resources collection and database
- Monitor viability of germplasm accessions
- Multiply or regenerate accessions in collection
- Conserve local plant genetic resources through *in situ* methods
- Provide a procurement service for germplasm to researchers from other genebanks
- Provide Namibian germplasm to *bona fide* users world-wide
- Create awareness on value of local plant genetic resources
- Promote utilisation of local plant genetic resources
- Participate in national, regional and international initiatives pertaining to plant genetic resources.

The functions of the Section National Botanic Garden Of Namibia (NBGN) are:

- Undertake horticultural trials of indigenous species with economic potential
- Promote the horticultural use of indigenous plant species
- Develop and maintain the National Botanic Garden of Namibia
- Provide an environmental education and recreational facility
- Create awareness and instil appreciation of Namibia's flora
- Enhance attraction of Capital City for tourists
- Participate in national, regional and international initiatives pertaining to horticulture and botanical gardens.

The functions of the Section Vegetation Ecology Unit (VEU) are:

- Undertake surveys of natural vegetation in terms of composition, structure, abundance of its components (e.g. individual plant species) and habitat
- Classify natural vegetation types according to the above criteria
- Describe natural vegetation types according to the above criteria
- Map vegetation types according to the above criteria
- Undertake degradation studies to determine ecological status of key (grazing) species (e.g. decreasers and increasers)
- Develop degradation models on various types of natural vegetation
- Monitor the long-term development of natural vegetation, especially regarding compositional changes.
- Give input into regional, national and local programmes / projects to combat land degradation and desertification (e.g. NAPCOD)
- Undertake veld condition assessments for land-use planning purposes
- Give inputs in land capability, land suitability and land productivity assessments in terms of natural vegetation
- Give inputs in environmental impact assessments in terms of the natural vegetation and in terms of sensitive ecological systems, considering the interrelationship between abiotic and biotic (i.e. vegetation) ecosystem components

- Undertake aut-ecological and eco-physiological studies on various indigenous plant species as inputs to rangeland modelling
- Undertake aut-ecological and eco-physiological studies on various indigenous plant species as inputs to an assessment to the sustainable use (harvesting) of such species for medicinal and other uses
- Undertake aut-ecological and eco-physiological studies on various indigenous plant species as inputs to possible re-introduction measures for future reclamation of badlands.

The functions of the Section Plant Product Development (PPD) are:

- Investigate opportunities and negotiate bilateral co-operation in plant product development
- Promote the commercialisation of indigenous flora
- Participate in feasibility assessments for plant product development
- Generally co-ordinate activities in the development of plant products
- Promote the cultivation of such products by small holder farmers as an integral part of a national agrodiversification programme
- Generate information pertaining to utilisation of indigenous plants
- Undertake resource assessments and situation analyses
- Liaise with the relevant authorities in the monitoring of off-take from natural populations
- Participate in national, regional and international initiatives pertaining to indigenous plant use and development.

As one of the seventeen ministerial libraries of the Ministry of Basic Education, Sport and Culture, and a branch library of the Namibian Agriculture and Water Information Centre, the functions of the M.A.N. Muller Reference Library are:

- Provide an effective information service to all its users
- Expand the collection of information sources through donations and purchases.

The Organisational Structure is attached as Appendix F.

CHAPTER 5
BALANCED SCORE CARD

5.1 DESCRIPTION

The Balanced Score Card system was developed by Kaplan and Norton (1996: 75). The Balanced Score Card has become the "Bible" for many organisations worldwide. The thesis of the said authors is that a Balanced Score Card converts visions and strategies into measurable goals communicating strategic intent. The message is that measures drive performance. What is measured is what is achieved. The traditional financial performance measures worked well for the industrial area, but are however, out of step with the skills and competencies companies are trying to master today, Pilot Software (1999: 5-7). In terms of the NBRI perspective, the traditional focus on the business processes (specific research projects) is out of step with the competencies required for and within the context of the new focus on the end customers and development of staff.

According to King (1999) the Balanced Score Card is a management system that integrates an organisation's strategic operating objectives with balanced performance measures as a basis for monitoring planned achievement and an indication for future performance.

To summarise, the Balanced Score Card motivates and directs the activities of the organisation into a defined set of objectives and provides a framework for the following:

- Identifying
- Articulating
- Measuring
- Monitoring the behaviours paramount for organisational and individual success.

5.2 PURPOSE AND BENEFITS

The purpose of the Balanced Score Card is:

- To identify the 'off balance sheet' value in an enterprise in order to enable specific management thereof
- To explain the difference between balance sheet value and that of the stock market, also referred to as the intellectual capital of the enterprise

- To balance the amount of management effort expended on financial aspects and intellectual capacity, respectively.

The Balanced Score Card was chosen as the approach to improve performance as its benefits include:

- Translating strategy into action.
- Enabling communication.
- Aligning of the organisation and its strategy with its environment and performance.
- Providing focus to the organisation.

No single fact or indicator is sufficiently broad and clear to reveal how the entire organisation is performing. Companies need a balanced model that focuses on a range of internal and external measures and indicators as well as the performance drivers and outcome metrics that describe the cause-and-effect relationship behind the strategy.

5.3 AREAS/QUADRANTS

Kaplan and Norton asserted that a business needs an appropriate balance of measures and developed the Balanced Score Card based on measures of the following areas:

- Finance (including stakeholders' view)
- Marketing (how the business is seen by customers)
- Continuous improvement (how the business continues to improve and innovate)
- Internal view looking at excellence (including staff development), Irwin (2003: 9).

The author adjusted the above areas for the NBRI to make it more suitable for a Public Sector institution. For the purposes of this study, the Balanced Score Card focuses on the following four areas/quadrants:

- Business Process
- Financial
- Customer Focus
- Learning and Growth.

Following the development of the high level statements, external and internal analyses were undertaken, and strategic issues identified and prioritised in terms of the four areas of the Balance Sore Card.

Business process refers to:

- How effective are the key business processes?
- At what must we excel at to achieve the mission?

Financial refers to:

- What must we do to succeed financially?

Customer satisfaction refers to:

- How should the NBRI appear to its customers to achieve the mission?

Learning and Growth refers to:

- How will the NBRI sustain its ability to change and improve to achieve its mission?

5.4 KEY FACTORS IN EVALUATION

The following key factors are important in evaluating Balanced Score Card Systems:

- Develop and communicate the strategy
- Flexibility to change measures as the business changes
- Data availability from different operational systems
- Visibility to all staff and acceptance
- Adjustment to individual organisational requirements, Pilot Software (1999: 5-7).

Develop and communicate the strategy

This requirement was met as all staff were involved in articulating and communicating the issues and the strategies developed.

Flexibility to change measures as the business changes

This is possible, as all strategies require different performance measures that are unique for successful implementation.

Data availability from different operational systems

For proper capacity and demand management, it is required that the NBRI keeps a future record of all performance and finance-related information. This will enable the development of a baseline for planning realistic and attainable targets and unit costs.

Visibility to all staff and acceptance

The NBRI must ingrain the Balanced Score Card as part of the company culture to influence staff behaviour and activities. This is essential for the development of Project Research Criteria based on the Balanced Score Card System.

Adjustment to organisational and individual requirements

The Balanced Score Card was adjusted to meet the unique needs of the NBRI. The business performance of the NBRI needs to be directed in future by the activities of an integrated project planning and management system that compliments the Balanced Score Card System.

CHAPTER 6
EXTERNAL AND INTERNAL ENVIRONMENT

6.1 ENVIRONMENTAL SCANNING

The process used in this chapter is 'environmental scanning', which refers to the process dealing with the measurement, projection and evaluation of change in the different environmental variables, Cronje *et. al*. (1996: 66). The method of environmental scanning has similarities with the methodology used for this study, namely updated secondary and primary information.

6.2 EXTERNAL

6.2.1 PEST Analyses

Aaker (1998: 99-105) used the following dimensions of environmental analysis:

- Technology
- Government
- Economics
- Culture
- Demographics.

The author decided that, of the above, the Culture and Demographics needed to be replaced with Political, and Government is not necessary as the NBRI is a public sector institution.

The following issues were allocated to a group (four to five people) for brainstorming and presentation to the larger group (all staff of the NBRI):

- Political
- Social
- Economical
- Technological, United Kingdom Civil Service College (1996a: 1-5).

See **Table** 6.1: Issues Identified, for issues in the said format.

6.2.2 Industry Attractiveness

For an analysis of the Industry Attractiveness of the NBRI, see Appendix E.

6.2.3 Analysis of Competitive Forces

For an analysis of the Five Competitive Forces, see Appendix F.

6.3 INTERNAL

6.3.1 Strengths, Weaknesses and Threats

NBRI staff was divided into groups and each group was tasked with brainstorming one of the following areas:

- Strengths
- Weaknesses, see **Table** 6.2 for Internal Weaknesses
- Threats, see **Table** 6.3
- Technologies and Developments, see **Table** 6.4

The process used to identify the above-mentioned issues is what is known as the SWOT analysis:

- Strengths
- Weaknesses
- Opportunities
- Threats, United Kingdom Civil Service College (1996b: 1)

The three major categories that are the basic elements of a systems model were assessed:

- Resources (inputs)
- Present strategy (process)
- Performance (outputs).

Resources include the following:

- People
- Economic
- Information
- Competencies.

Present strategy refers to:

- Overall strategy

- More specific or functional strategies, Bryson (1988: 19).

Performance refers to:

- Output and outcome based performance.
- The track record of an organisation.

6.3.2 Leadership Style

Although a very dated reference, Packard (1962: 170) is still valid regarding his description of leadership as: The art of getting others to want to do something you are convinced should be done.

According to Maxwell (2000: 15-19), leadership is:

- Influence
- Integrity
- Ability to attract people that follow
- To develop other people
- To act with self-discipline
- Ability to solve problems
- Ability to develop vision and inspire people
- Ability to create positive change.

The leadership style at the NBRI can be described as participatory and situational. The Head of the Institute is open to ideas and flexible in her approach to accommodate alternative views. In terms of the Balanced Score Card, the leadership style within the NBRI and the MAWRD is as follows:

Business Process

- Freedom to apply scientific principles in research projects
- Limited interference regarding choice of research projects.
- Greatest freedom in this quadrant compared to the other three of the Balanced Score Card.

Customer Satisfaction

- Increased pressure from MAWRD to apply participatory Farming Systems Research and Extension approach to meet the needs of rural farmers, not always possible, due to international scientific principles that should not be lowered in case of uncontrolled experiments and applying control group interference.

Financial

- Limited control over allocation of funds and budget cuts across the board
- Limited control over release of funds and little time to spend money appropriately.
- Resistance from Ministry of Finance to create trade accounts and a revolving fund to enable income generation for providing improved products and services.

Learning and Growth

- No performance system in place in government service
- No integrated human resources development plan in place
- Development of people on *ad hoc* basis and not in line with Business Planning
- Only recommendation authority in terms of the appointment of personnel
- Inconsistent application of disciplinary code and procedures.

6.3.3 Productivity

Productivity, in its simplest form, is system outputs divided by the system inputs, Lewis *et al*. (1998: 584).

6.3.4 Team Performance

The objective is to focus on the performance of teams within the NBRI.

NBRI Investor Triangle

For illustrating the relationship between leadership, team performance and the mission of NBRI, see attached Appendix G for the NBRI Investor Triangle. Developed by Kiyosaki (2000: 253-259), it has been adapted as the NBRI Investor Triangle only in name only and the building blocks remain the same. The five blocks refer to the dynamic building blocks and include the following:

- Cash flow, which includes the available cash on hand for operations and the source from where this cash is generated
- Communications, which include public relations and networking
- Systems, viz. all processes, procedures and activities in all four areas
- Legal structures, such as the mandate from the Government of Namibia to operate in terms of acts that enable the monitoring and protecting of indigenous plant species
- Products and services, such as publications and plant identifications.

The NBRI has a well-oiled business process system in place. However, overall team performance can be improved by a balanced focus on the other three areas of the business:

- Customer satisfaction
- Financial
- Learning and growth.

6.3.5 Interpersonal and Inter-Group Relations

The objective is to focus on the importance of personal relations amongst personnel and relations amongst groups, and how these relations impact on the business objectives and strategy of NBRI.

Interpersonal Relations

Interpersonal relations are determined by a variety of factors of which power is a major one. Power and the exertion of influence is a fact of organisational life. Hall and Hawker (1988: 1-17) make distinctions in the following power management inventory:

- Affiliative power, meaning individuals with a greater concern of being liked than to make a difference or having an impact on an organisation
- Socialised power, meaning individuals focusing on fairness and justice, respectful of other's rights and builders of systems and people
- Personalised power, meaning individuals focusing on their personal expertise and characteristic of inspirational individuals who do not conform to group norms.

Inter-Group Relations

The inter-group relations are to a very large extent determined by institutional boundaries. NBRI management consists of four persons, with a wide variety of corporate responsibilities.

Inter-group relations are shaped by -

- Integrity
- Trust
- Personal power.

The Head of the Institute has vision, insight and is an achiever and implementer. Management is respected, trustworthy and task-orientated. NBRI occupies its own building with excellent facilities, of which the location is remote from the headquarters of the MAWRD. The NBRI employs mainly women, contributing to a unique culture that is quite distinctive from the rest of the MAWRD. The inter-group relationship with the rest of the MAWRD can be improved.

6.3.6 Organisational Structure

For a functional analysis of the Organisational Structure of the NBRI, see Appendix A. According to Cronje, Hugo, Neuland and Van Reenen (1987: 111), an older source yet still valid, the key is strategy before structure. Strategy focuses on what needs to be done. The organisational structure focuses on how it should be done, in terms of the best organisational and functional lines to execute the business objectives with people in the right places, adequate responsibilities and authority to execute strategy.

6.3.7 Culture and Strategy

Culture is, according to Robbins (1989: 615), developed over many years and is rooted in deeply held values to which employees are strongly committed. According to Applegate, McFarlan and Mc Kensey (1999: 5), corporate culture is embodied by the organisation's shared values and operationalised in its processes, for example the following:

- Corporate planning
- Philosophy of control
- Speed of core product/technological change.

Corporate culture is a system of shared values and beliefs that interact with an organisation's people, structure and systems to produce behavioural norms. Culture is derived from management and the organisation itself, Harvey and Brown (2001: 69).

At its most basic, corporate culture is the personality of an organisation, or 'how things are done around here'. It guides how employees think, act, and feel. In practice, what management pays attention to and rewards is often the strongest indicator of the organisation's culture, Hagberg and Heifetz (2002).

The following dimensions of corporate culture can be distinguished:

- Depth, namely mission/reason for existence of an organisation and the high level statements
- Breadth or scope of all the activities
- Progression, namely the extent to which different plans and actions in different stages of development at a certain point have continuity and permanence.

The following processes influence corporate culture:

- Cooperation, implying the willingness of people to cooperate in a spirit of goodwill and mutual trust
- Decision-making, implying the choice between what should be done and what should not be done
- Control, implying the ability to take steps and to evaluate and measure planned results
- Communication, as the lifeblood of an organisation
- Commitment, implying that individuals need to identify with an organisation
- Perception, about shared values and beliefs
- Justification and behaviour, implying the opportunity allowed to individuals to make sense of corporate behaviour, Smit and De Cronje (1995: 383-400).

The stronger the culture, and the more it is focused on the marketplace, the less need there is for policy manuals, organisation charts, or procedures and rules. Coherence of culture has been proven to be an essential quality of excellent companies. Excellent companies are

marked by strong cultures - so strong, in fact, that one buy either buys into their norms or gets out. The culture of excellent companies is not inwardly focused, it is open to customers, who in turn inject a sense of balance and proportion. Excellent companies have turned themselves into unique contributors to society Peters and Waterman (1995: 75, 77 and 79-80).

'New culture' focuses on values, e.g.:

- Service to the customer
- Innovation
- Consensus
- Cooperation.

The following four varieties of culture exist:

- Power culture, found in small entrepreneurial organisations
- Role culture, found in large bureaucracies
- Task culture, in job- or project-orientated organisations
- Person culture, where one individual is the central point, Weightman (1993: 96).

The importance of corporate culture is growing as a result of the following:

- Companies are encouraging employees to be more responsible and to act and think like owners
- In exchange for more flexible work schedules, employees are expected to always be 'on-call'
- With the diminishing of more traditional communities, e.g. neighbourhoods, companies are filling the need of employees to belong to a community
- Companies are encouraging teamwork and the formation of teams, West (2002).

Much of bad corporate culture can be traced to limited communication. A survey of one company found that 65% of exiting employees indicated that a lack of coaching or feedback was key in their decision to leave, Boswell (2002). Culture management is the process of developing and reinforcing an appropriate culture.

Culture management is concerned with the following:

- Culture change
- Culture reinforcement
- Change management
- Commitment gain, Armstrong (1994: 95).

Enduring, great companies are usually built on both a solid foundation of timeless core/ operating/corporate values, and also on the adaptability of behavioral practices, secondary values, structures and other cultural artifacts, Hagberg and Heifetz (2002).

Corporate culture is so embracive that it is nothing more than corporate strategy, whilst inspiration and visionary leadership, culture management, “walking and talking” the core values, with a renewed emphasis on corporate citizenship, play the most profound shaping and changing role.

According to Harvey, Donald and Brown (2001: 431-434), culture provides a set of values for setting priorities as to what is important, and the way things are done in an organisation. Thus, culture is of critical importance in the implementation of a new strategy. Only very few organisations have been able to execute a complex change in strategy. Culture is the product of structure, systems, people and style that all influence the way managerial tasks are performed.

CHAPTER 7
ISSUES, RESPONSES AND STRATEGY

7.1 ISSUE IDENTIFICATION AND IMPACT

7.1.1 Definition

Strategic issues are fundamental policy questions affecting the following:

- Mandates
- Mission
- Values
- Product or service
- Level and mix
- Clients
- Users or payers
- Cost
- Financing
- Management
- Organisation design, Bryson (1988: 14)

An issue can be any of the following:

- Development
- Event
- Cabinet decision
- Trend
- Factor
- Force, Coetzee (2001).

For the purposes of clarification, an issue was described as a fundamental challenge affecting the following of the NBRI:

- Mandate
- Mission
- Operating values
- Service level
- Customers

- Funding
- Management, Coetzee (1998).

7.1.2 Approaches

The following are approaches to issue identification:

- Scenario or 'vision of success' approach, in which an ideal picture of an organisation is developed in the future. This approach is more likely to be followed by profit organisations that are less constrained by mandates.
- The direct approach, in which strategic planners go straight from a view of mandates, mission and Strengths, Weaknesses, Opportunities and Threats (SWOT) to the identification of strategic issues, works best for government and non-profit organisations. Aaker (1998: 109-112) uses the scenario approach.
- The goals approach, in which an organisation establishes goals and objectives and then develops strategies to achieve those goals and objectives. This approach is more likely to work in organisations with hierarchical authority structures, where key decision-makers can impose goals on others.

A combination of the two above approaches was used for this study.

The probability of the occurrence of an issue and the degree of impact of Boyd, Walker and Larreche (1998: 73 and 74) was used as a guide, to score issues in terms of their critical importance to the NBRI. For an analysis of the Impact of Issues, see the following tables:

- **Table** 7.1: Political Issues
- **Table** 7.2: Policy and Legislation
- **Table** 7.3: Procedural Issues
- **Table** 7.4: Economic Issues
- **Table** 7.5: Environmental Issues
- **Table** 7.6: Climate and Weather.

7.2 DEVELOPING RESPONSES AND STRATEGIES

Sun-tzu (1988: 2) in 250 BC defined the ideal strategy as a "plan for what is difficult while it is easy, do what is great while it is small, the most difficult things in the world must be

done while they are easy, the greatest things in the world must be done while they are still small".

A response or strategy is a plan of how to attain objectives and goals, answering the questions of how, where and when, and, according to Taylor (1999), consists of the following elements:

- Scope, referring to products, services and markets
- Resources, covering funding, equipment, material and staffing
- Competencies, which refers to uniqueness
- Synergy, which refers to the added advantage from a combination of resources.

According to De Harde (1999), the strategic question is: "Which product, to what customers, in which segment, that are where, via what delivery mechanism?".

To summarise, Hellreigel, Jackson and Slocum (1999: 221) stated that strategies are the major course of action that an organisation takes to achieve its goals. Burgelman, Maidique and Wheelwright (2001: 6-7) mention that Porter's generic strategies distinguish amongst the following:

- Industry-wide differentiation
- Focused differentiation
- Industry-wide cost leadership
- Focused cost leadership.

The NBRI applied the industry-wide differentiation strategy prior to the business planning process. Once the planning process started, the need for developing a focused differentiation strategy became clear as the NBRI started to refocus on its customers and their needs.

In this study, responses refer to strategies that were developed for issues prior to the prioritising of the most important issues and strategies for developing an action plan.

Responses to issues and strategies can be categorised as follows:

- No action required, only monitoring
- Part of regular strategic planning cycle, continuous or ongoing
- Cannot be handled in a routine way, immediate response required.

The following techniques were used to develop responses and strategies:

- Brainstorming
- Delphi technique, by means of unidentified contribution, a system widely applied by GTZ
- Facilitation
- Soft systems in which root causes are identified, United Kingdom Civil Service College (1997a: 1-3)
- Fishbone, for identifying all possible causes
- Process Flow Charts
- 7-S Strategy Checklist
- Questionnaires
- Plan, do, check and act.

7.3 ACHIEVABILITY OF RESPONSES AND STRATEGIES

The achievability of responses was scored based on the most likely probability that the responses/strategies are implementable. This score is very much based on historic information, however, and not supported by scientific evidence

7.4 SCORING AND PRIORITISING OF ISSUES AND STRATEGIES

A seven-point scoring system was used to score impact of issues and achievability of responses. The seven-point scoring system is widely used in performance assessment of individuals, and is regarded as being useful tool for scoring.

After multiplying the scores of impact and achievability, the issues having the highest scores were listed in priority order. Due to the vast number of issues and the limited capacity of the NBRI do address all these, only ten have were selected. These selected issues were representative of all four areas of the Balanced Score Card and were not merely those with the highest scores, which would have kept the NBRI locked in the problem of focusing too much on business process issues only. It was imperative that only realistic and achievable issues were considered for implementation, since an unrealistic strategy could have made NBRI staff negative towards any future business planning, and thus compromising the sustainability of the process.

CHAPTER 8
DEMAND MANAGEMENT

8.1 SUPPLY CHAIN AND DEMAND

Pycraft, Singh and Phihlela (2000: 475) state that supply chain management (SCM) can be described as "managing the entire chain of raw material supply, manufacture, assembly and distribution to the end customer". However, on an individual project basis (same concept as a supply chain), the critical tasks need to be identified, as was done in the case of Antarctic Support Associates, Goldratt (1999a).

Throughout the implementation of the improved supply chain and improved performance measures, addressing cultural change issues are of paramount importance, Goldratt (1999a). As in the case of the ongoing Theory of Chaos (TOC) Journey at the Brickman Group, the following valuable guidelines were applied in NBRI:

- Don't change too many processes too quickly - people need to adjust gradually
- Everyone doesn't learn and accept change at the same speed, Goldratt (1999b).

The NBRI indicated that in order to respond to demand the following are needed:

- To re-focus on crop diversification in communal farming areas, in to response to current resource levels
- To examine research activities to ensure that they are needs-driven and effective
- To determine if the availability of research material internationally/regionally implies that certain current research is not needed/necessary, and to identify the latter
- To free some current resources for performing higher priority activities
- To determine if new skills are needed to implement the Farming Systems Research and Extension (FSRE) approach of MAWRD
- To determine which existing and emerging demands can be met.

The NBRI is experiencing an increased demand due to the following:

- Signing of international conventions such as CBD, FCCC, CCD, RAMSAR and
- CITES on the topics of Biodiversity and Desertification
- Bilateral agreements, e.g. within the SADC region.

The following contribute to the fluctuation of demand:

- Seasonality due to climate conditions
- A refocus on rural community needs that are linked to donor assistance
- Increased pressure on decreasing government resources
- Restructuring of the MAWRD Top management intervention.

The greatest part of the total demand is variable, and can be adjusted. Crude methods and/or limited techniques are used to qualify and quantify demand. The demand consists of a combination of products and services of which approximately 90% of the volume is executed on a project basis.

In order to improve performance, Burkhard (1999) suggests that the greatest constraint in the supply chain needs to be identified and removed. The greatest constraint at the NBRI is the inability to access the potential benefit of a project prior to committing resources to it. The NBRI applied the opposite of the approach of the Lord Corporation, e.g. the "shotgun approach'', which is to do a little on every project to keep everyone happy, Abraham Goldratt Institute (1999c). The NBRI did as much as possible on every project to keep everyone happy.

Criteria were developed to assess the benefits of implementing a project, based on equal weightings applied to the four areas of the Balanced Score Card. Thus, the application of these criteria enables the NBRI to assess the potential benefit of a project prior to committing resources. The NBRI is now able to control, adjust and thus manage the demand based on measuring available capacity. To confirm its practicality prior to full implementation, the criteria were applied, to a pilot assessment of a number of diversified projects. Application of the criteria is in effect a cost benefit analysis - the four performance objectives include all areas of the business.

Quantifying the demand is another complementary approach to management and controls the demand, and is done as follows:

Measuring capacity is executed by means of quantifying historical performance, e.g.:

- Number of plant identifications done per trained staff member
- Number of endangered plant species de-listed per trained staff member
- Number of projects completed on time and within budget
- Number of information packages made and available to customers
- Number of visitors to herbarium.

Available capacity is quantified as follows:

- Design capacity and actual capacity
- (T) Theoretical capacity- available working hours (21.7 days/month/staff member)
- (E) Effective capacity - (sick leave, study leave, vacation, rainy season if applicable)
- (A) Actual output = T-E
- Utilisation = A/T
- Efficiency = A/E.

The following performance estimations are already implemented. On a project basis projects that need to:

- Be executed (output)
- Working hours available (input)
- Plant id's (number)
- Threatened plant species (number)
- Information requested (frequency and type)
- Advice on Environmental Assessments (number)
- Visitors to herbarium (number).

This information enables the NBRI to adjust demand and capacity on a continuous basis by means of applying the following:

- Overtime and idle time
- Varying the size of the workforce – hiring, secondment, transfers, foreigners on contract
- Part-time staff
- Volunteers (retired botanists)
- Students

- Subcontracting.

8.2 DATA GATHERING

Data are gathered as follows:

- Field trips
- New plants collected, clarified, named
- Identification of threatened plants
- Monitoring of changes in vegetation
- Conferences
- Global trends and new scientific techniques
- Advice on Environmental Impact Assessments gathered, supplied and analysed in Geographical Information System (GIS) format to do crop modelling
- Erosion hazard mapping, vegetation coverage mapping and drought warnings
- Updating the Standardised Precipitation Index of Namibia
- Routine plant identifications
- Data mining for applied research
- Economic and pharmaceutical analysis
- Reports to donors, management and other institutions
- Compliance with international standards.

8.3 PRODUCTS AND SERVICES

Products and services include the following:

- Articles on plants/flora fauna in scientific Journals, e.g. Bothalia
- Identification of flora for reference purposes in book format for the public
- Papers on conferences, e.g. Annual Research Conference of the MAWRD
- Reports to donors, management, other institutions and companies on economic and pharmaceutical use of indigenous plants
- Plant identifications on request
- Data mining for applied research
- Potential economic and pharmaceutical use of plants
- Compliance with international instruments on biodiversity and desertification
- Informing the public about threatened plants

- Providing information to students about flora
- Vegetation mapping for advising on drought prevention and crop modelling
- Drought warnings
- Erosion hazard mapping for addressing erosion of soil
- Advice on rehabilitation of mine sites
- Advice on environmental assessments
- Articles in Scientific Journals
- Project reports to management, sponsors, other institutions and NGO's
- Papers on conferences
- Flyers such as "Spotlight on Agriculture" and other popular publications
- Presentation of research results at the Annual Research Conference and others
- Farmer's days
- Website.

8.4 END CUSTOMERS

End customers have been identified as a diverse range of the following entities:

- International organisations such as the Food and Agricultural Organisation (FAO) of the United Nations
- Companies such as pharmaceutical companies
- Commercial farmers
- Namibian Agricultural Union
- Namibian National Farmers Union
- Communal farmers
- Nurseries
- Entrepreneurs
- Donors
- Ministry of Mines and Energy
- Ministry of Trade and Industry
- Business Groups of the MAWRD
- Ministry of Environment and Tourism
- Ministry of Land, Resettlement and Rehabilitation
- Farming Cooperatives

- Non Governmental Organisations
- Plant Breeders
- Scientists
- Conservation Planners.

CHAPTER 9
PROJECT PLANNING AND MANAGEMENT

9.1 TERMINOLOGY

A project is a series of inter-related activities that are undertaken to accomplish a specific goal or end result, Thinking Dimensions Group (1998: 3). Pycraft *et al*. (2000: 605) added to this by stating that a project is a set of activities that have a starting point and a defined end state, which pursue a defined goal and that use a defined set of resources.

Project planning enables the following:

- Exposes the cost and duration of a project
- Determines the level of resources that will be needed
- Allocates work
- Monitors work, Pycraft *et al.* (2000: 605).

Project management is the actions needed to define the project's requirements, and planning of the activities to accomplish these requirements in order to ensure successful project implementation, Thinking Dimensions Group (1998: 3).

Developing and implementing the Business Plan of the NBRI was approached as a project, and the effectiveness thereof needs to be measured as such. In developing the most appropriate project planning and management system, a unique system was developed, consisting of the following:

- Identifying issues
- Prioritising issues
- Developing strategies
- Compiling a strategy checklist
- Developing performance indicators
- Allocation of responsibility to strategies
- Allocation of timeframes to strategies
- Implementation of strategies and monitoring thereof
- Evaluation and adjustment of strategies

See Appendix H for a Diagram of the Strategic and Business Planning Process.

9.2 PRIORITISING ISSUES

Issues were prioritised based on the four areas of the Balanced Score Card, and within each of these areas based on the weighted average of impact of issues and achievability of strategies. The approach was to gauge what was possible to achieve and not to have numerous, unrealistic and unachievable activities at the end of the business year. The non-accomplishment of strategies could have a negative impact on the motivation of staff, in the sense that they need to benefit systematically from the sustainable implementation of business planning.

9.3 STRATEGY CHECKLIST

Strategic challenges can include the following:

- Ethical
- International
- Creative
- Implemented.

Strategy measures include the following criteria:

- Cost
- Speed
- Flexibility
- Dependability/foundation and
- Quality:

    Functionality
    Appearance
    Reliability
    Durability
    Recovery
    Contact, Pycraft *et al*.(2000: 619).

Criteria of strategies' include the following:

- Is it appropriate in our drive for competitiveness?
- Is it comprehensive in touching all aspects?

- Is it coherent in pointing in the same direction?
- Is it consistent over time and not “flavour of the month”?
- Is it credible and achievable?

The 7-S Strategy Checklist that follows is a useful tool:

- For brainstorming issues
- In testing if issues in the internal environment are exhausted during SWOT and
- PEST
- To determine if strategies during the strategy formulation process are adequate for implementation.

The 7-S-Strategy checklist is built upon the following:

- Staff, viz.: Demography, experience and training
- Structure: Organisational chart
  Hierarchy
  Responsibility
  Delegation (four ways of organisational structuring)
- System: Work processes and work flow
- Shared values: Two or three operational values
- Style: Management behaviour, appraisal and reward systems determine what type of behaviour is rewarded
- Skills are in the centre and refer to expertise and experience
- Strategy, viz.: Objectives, high-level statements, direction of organisation, areas expanding/contracting, determine which skills are encouraged for this direction.

9.4 RESPONSIBILITY

Every strategy needs to be allocated to a person that accepts full and final responsibility for executing it. Such a person needs to co-opt several people to assist him or her in executing such a strategy. This also enables buying in and committing people, and transferring skills in developing, amending and executing strategies as part of the ongoing strategic/business planning process.

9.5 PROJECT PERFORMANCE ASSESSMENT

9.5.1 Performance Measures

Implementing performance measures, that are both acceptable to the organisation and achievable for the employee, ensures that the organisation maintains its competitive strategic advantage with support of all staff, Anderson (1999). Input measures are e.g. working hours, whilst output and outcome measures are, e.g.: Threatened plants delisted, printed and published research material.

Indicators

An indicator is more specific than a measure, but not to the full extent of a target e.g. number of threatened plants delisted. Indicators provide an indication of performance and should comply with as many of the following requirements as possible, viz.:

- Measurable
- Tangible
- Quality
- Time
- Numbers
- Percentage (%).

Targets

A target is when you add a percentage (%) of quality and or customer satisfaction level and a specific time frame with a beginning and an end time to the above mentioned performance measure. Key indicator areas considered for developing action plans are:

- Productivity
- Efficiency
- Volume
- Quality
- Unit labour costs
- Unit costs, Macpherson (2003: 2-8).

With the performance measure as a basis, a target needs to be developed, e.g.:

Five threatened plant species delisted during the period (specify date) by (specify name(s) of responsible persons). These need not to be listed as threatened again during the next five

years by executing six awareness-raising campaigns during the period (specify date) to inform the target group about the importance of these plant species for future sustainability of the ecosystem.

NBRI examples of outcome based performance targets are:

- Number of research papers published of international standing
- Number of information packages distributed that meet 80% customer expectations
- Number of new species described
- Number of presentations to target group of customers
- Number of presentations to target group of management
- Number of complaints addressed to the satisfaction of customers
- Level of compliance with standards set by international conversions.

9.6 TIMEFRAME

All action plans require an indication of the following:

- Starting date
- Progress review date
- End/completion date.

9.7 IMPLEMENTATION AND MONITORING

Implementation elements that are critical include:

- Top management support
- Change strategies are integrated
- Strategy drives technology
- Investment in people and technology
- Management of people and technology
- “Everybody in the boat”
- Clear, focused objectives
- Monitoring and control.

Implementation needs to be recorded as follows:

- Developed and implemented
- Not started with implementation

- In the process of implementation
- Revised strategies
- New strategies.

9.8 EVALUATION AND ADJUSTMENT

By definition, a project has an end. Completion of the project is thus capable of being measured with an assessment of its success, United Kingdom Civil Service College (1997a: 38). As strategies are implemented, changes in environmental conditions leave the organisation with no other option than to change strategies in order to be successful. This ongoing process of change is a natural process in successful organisations. However, in less successful organisations, it could be used as an excuse not to implement strategies and not to achieve objectives. To ensure success with the strategic/business planning process, it is important that top management should “walk and talk” the operating values and commit themselves to the achievement of the objectives and strategies. However, for the business planning process to be sustainable, it should be driven by middle management who need to ensure that it is implemented on operational level.

CHAPTER 10
ACTION PLANS

10.1BUSINESS PROCESS

The business process of the NBRI is based on sound scientific research principles, an area which is undoubtedly one of its strengths. The scientific standing of its researchers is recognised internationally. During the issue identification process, it became clear that most of the issues listed represent the business process area, See **Table** 6.1: Issue Identification. The NBRI was imbalanced in terms of the other three areas of the Balanced Score Card.

A tool that could be useful in assisting the NBRI in the business planning process, and actually all the other areas of the Balanced Score Card, is the development of an Information Technology Balance Sheet. This could provide an indication of the suitability of the current technology for current products and services and consider the product life cycle, the markets as well as the development of new markets, for ongoing sustainability of product and service life cycles. The development of a technology strategy that is concerned with exploiting, developing and maintaining the sum total of an institution's knowledge and abilities, Ford (1988: 85), will be critical for integrating current databases. See **Table** 10.1: Business Process Action Plan.

10.2CUSTOMER SATISFACTION

Heeding the call for being more responsive to customer needs and marketing the NBRI, outreach actions were developed. Customer satisfaction levels for the Biosystematics component were determined during a Biosystematics End User Workshop, (Irish: 2003). The latter will be extended on an annual basis to other business areas. See **Table** 10.2: Customer Satisfaction Action Plan.

10.3FINANCIAL

Irrespective of the constraints of the current financial system, various actions were developed of which some were already implemented, including e.g. the creation of cost awareness and the improvement of internal systems for better control. See **Table** 10.3: Financial Action Plan.

10.4 LEARNING AND GROWTH

"Learning and growth" includes human resources development. The two terms are used interchangeably. The term learning and growth is preferred since it focuses on:

- Change management
- People management
- Changing the organisation to become a learning organisation
- Adapting to changes on a continuous basis.

The better the NBRI performs in terms of learning and growth, the better the institutional performance will be. One of the most critical factors in the successful implementation of the required change is the level of operational and strategic leadership provided by the organisation's management, and the extent to which they can mobilise the support of the employees.

In order for a human resources strategy to be successful, the business direction needs to be firmly in place. The business direction sets the business needs and thus the future competencies required to execute the planned business strategy. From the current staff complement as the baseline and the future business needs, the future competency areas can be identified. The current staff complement and its competencies can be assessed and mapped in terms of its current and potential future development. As this is a rather expensive and sophisticated tool to use in non-profit and government organisations, it was not applied in this study. However, simpler quantitative and qualitative tools were applied in developing a human resources strategy. It is critical to mention that the government individual performance measurement system was abandoned during 2000 and another system is in the process of development. Until such time that this is in place, complementary and informal performance guidelines will be applied to reward performance non-financially.

With the current and future competencies assessed, the training needs of staff must to be identified, formal and informal training organised, staff trained and the effectiveness thereof assessed. According to Swanepoel *et al*. (2000: 500) any thorough needs assessment must address three key areas:

- Organisation
- Job
- Individual.

See **Table** 10.4: Learning and Growth Action Plan.

CHAPTER 11
PROJECT RESEARCH CRITERIA

11.1 OBJECTIVE

The objective was to develop criteria that can be used for assessing the suitability of current projects for prioritising their importance, based on the Balanced Score Card. The project research criteria are in the process of development and will be completed during 2005. See the **Table** 10.1: Business Process Action Plan.

11.2OPTIONS CONSIDERED

11.2.1 Social Cost Benefit Analysis

Main elements of the social cost benefit analysis were applied, for e.g. identifying the environmental impact and value.

11.2.2 Applied Scientific Criteria

Scientific criteria were accepted as the basis for the development of project research criteria. The Tree Atlas Project was used to test for the scientific requirements that follow:

Validity

The dimensions of validity are the following:

- Theoretical validity
- Measurement validity
- Representativeness
- Reliability
- Inferential validity, Mouton (1998: 112) and Mouton (2001: 101 and 102).

Theoretical validity entails the theoretical definition of concepts, e.g. to arrange the most important dimensions of the meanings of theoretical concepts. To arrange logically implies that the logical rules of correct classification and the rules of mutual exclusion and exhaustiveness have to be adhered to, Mouton (1998: 118).

Measurement validity consists of criterion validity and construct validity. Since estimation of important behaviour is not applicable for developing the project research criteria,

criterion validity was of no concern in this study. Construct validity deals with the question of whether the items in the research criteria questionnaire actually measure the construct, viz. the most suitable and/or most appropriate project information that it is supposed to measure. In the development of the project research criteria, the following threats to construct validity were recognized:

- Poor conceptualisation
- Mono-operation bias, when single indicators or measurements of a construct are employed
- Mono-method bias, which refers to problems resulting from the use of the same type of measurement technique for collecting data on the construct that is being investigated, Mouton (1998: 128 and 129).

Reliability

Reliable data are important for the project research criteria. If the same measures are used and the conditions under which the data are collected are kept as constant as possible, the same data should be produced under different situations. Thus, reliability is synonymous with stability or consistency over time, Mouton (1998: 111).

11.3 OUTPUT

The NBRI decided to separate the development of the Business Plan from the development of the Project Research Criteria. The research criteria are in the process of development and will be finalised during 2005.

CHAPTER 12
BUSINESS PLANNING AND STRATEGIC MANAGEMENT SEQUENCE

12.1PROCESS

The business planning and strategic management model of the NBRI is discussed in the following chronological sequence:

1. Identifying the needs of the customer by assisting the NBRI in identifying:

- In what business is the NBRI?
- Where does the NBRI want to be in future?
- How to get to the visualised position? Diagram on Strategic Planning Process.

2. Developing a Terms of Reference to improve institutional performance and to develop a Business Plan.

3. Soliciting the expectations of all staff of the NBRI by applying participatory techniques such as ZOP methodology themes (no-identify cards) and grouping of issues in common themes for issue identification. See **Table** 6.1: Issue Identification.

4. Explaining the framework of the Strategic and Business Planning Processes and focusing on:

- Benefits, namely managerial, organisational and individual, refer to NBRI Investor Triangle.
- Critical success factors
- Barriers
- How to overcome the barriers.

See Appendix H: Diagram of the Strategic and Business Planning Process and Strategic Pyramid.

5. Scanning the external environment, using PEST (Political, Economical, Social Technology and Environment). See **Table** 7.1: Political Issues, **Table** 7.4: Economical Issues and **Table** 7.5: Environmental Issues, and identifying:

- Competitors
- Suppliers
- Buyers
- New entrants
- New services
- New products.

6. Identifying external opportunities by applying the following:

- Porter's Model of Five Competitive Forces
- Industry Attractiveness
- Industry Analyses.

7. Developing high level statements:

- Mission (reason for existence)
- Objectives (broad objectives no targets or time frame)
- Operating/core values (the latter is part of the 'psychology' of the institution and not more than three values should be developed for simplicity and future measurement) refer to Elements of Strategic Management.

8. Scanning the internal environment using SWOT (strengths, weaknesses, opportunities and threats) to take stock of:

- Resources:
  - Recurrent budget
  - Development budget
  - Donor funding
  - Equipment
  - Material and supplies
  - Facilities
- Culture
- Productivity
- Systems
- Leadership.

Could have used TOWS Matrix (Threats, Opportunities, Weaknesses and Strengths).

9. Contextualising NBRI planning in terms of the following:

- International linkages (Royal Botanic Garden, Kew, UK; National Botanical Institute, South Africa, Convention on Biological Diversity, Framework Convention on Climate Change)
- Regional: SADC Plant Genetic Resources Centre (SPGRC), and Southern African Botanical Diversity Network (SABONET)
- National (Vision 2030 and 2nd National Development Plan (NDP2).
- Cross-sectoral (PEMP, Green Plan, Biodiversity and Climate Change Work Programs of Namibia).
- Strategic or Ministerial Plan (MAWRD).
- Directorate, namely Business Plans and Directorate Activity Plans (Directorate Research and Training.

10. Identifying the mandate:

- Cabinet decisions
- Acts
- National Agricultural Policy (NAP)
- National Agricultural Strategy (NAS)
- National Agricultural Research Plan (NARP)
- International Conventions
- Bilateral Agreements, e.g. NBRI membership of the SPGRC.

11. Identifying the most important stakeholders and customers (internal and external) of the NBRI; stakeholders can also be identified during the issue articulation process by means of a stakeholder analysis.

12. Identifying and describing issues:

- Cabinet decisions
- Events
- Factors
- Trends that could impact on the NBRI.

13. Identifying the significance or importance of issues. Answer the question: Why is it important for stakeholders and customers?

14. Quantifying the possible impact or consequences of issues. What is the worst that could happen if an issue is ignored? Applying probability analyses, Winston, Albright and Broadie (1997: 406 and 407). Identifying the status of development of issues, namely to:

- Emerging
- Started
- Progressed
- Full impact.

15. Articulating of issues. Describing issues to meet the following requirements:

- Clear
- Crisp
- Focused format.

Use simple language that enables understanding of all staff. The better issues are described, the more focused problems can be identified, objectives formulated and strategies developed. See Table of Contents for a list of all tables developed.

16. Collating the above information that is regarded as the Strategic or Business Profile of a business, thus describing the business, as is, not how it should be.

17. Developing possible responses/strategies. How could the business respond to issues? Allow maximum participation. Considered Force Field and Fishbone.

18. Quantifying theoretical (total available time) and effective (minus sick, maternity leave, expected resignations, fieldwork disrupted due to rainy season) capacity and efficiency. Taking into consideration market forces demand and supply.

19. Forecasting expected output (based on baseline of statistics) and/or input capacity (only if no output performance indicators are available) to execute strategies. NBRI

limited to ten issues per Balanced Score Card area. Caution, be conservative, do not over-commit.

20. Assessing the achievability (responses realistic and pragmatic for successful implementation, zero to seven with seven as the highest of possible responses and strategies. See **Table** 7.5: Environmental Issues.

21. Scoring the impact of issues on stakeholders and customers achievability multiplied by impact, both out of seven.

22. Prioritising the most critical issues. Consider weighting and ranking and operational research models depending on the organisational sophistication of the lowest level of understanding of issues. The priority order will determine the importance of addressing issues during the implementation process. Critical issues are those issues that if not addressed, could severely damage the institution in terms of losing business/isolate/loose important customers or hamper stakeholder relationships or lose donor support if institution is highly dependant on sustainability of projects.

23. Quantifying internal capacity to respond to the most critical issues (theoretical minus effective capacity).

24. Considering capacity planning adjustment viz. adjusting internal capacity. Consider part time appointees and consultants due to fluctuations or change demand, decrease or increase.

25. Identifying the most appropriate responses and selecting the best possible strategies for addressing each issue.

26. Prioritising strategies of the most critical issues in terms of the four areas of the Balanced Score Card:

- Business Process
- Financial

- Customer
- Learning and Growth.

See the four (4) Actions Plans where strategies per issue were prioritised.

27. Executing a strategy checklist test that includes the following:

- Systems
- Strategy
- Structure
- Shared values
- Skills
- Staff
- Style, 7-S Strategy, to ensure strategies are covering all criteria of appropriate strategies to increase the probability for successful implementation.

28. Developing output and outcome based performance indicators:

- Quality such as:
  - Speed
  - Flexibility
  - Durability
  - Cost.
- Accuracy
- Percentage
- Numbers
- Customer satisfaction levels.

Applying a maximum crossbreed of indicators in combination to measure if NBRI is performing according to what was planned in terms of four (4) Action Plans.

29. Allocating of responsibility to strategies. In addition to teams, identify the names of competent and willing people that will take final responsibility.

30. Allocating of timeframes to strategies (see Action Plans):

- Start date

- Progress review date
- End date.

31. Embarking upon developing Project Research Criteria as a spin-off of the Business Planning Process for evaluating most appropriate projects to take on board. Integrating Business Planning Model, Project Research Criteria and Balanced Score Card. Applying criteria to Tree Atlas Project and Red Data List Projects for testing of:

- Validity
- Mutual exclusiveness
- Reliability.

Deciding to complete Business Actions Plans before completing Project Research Criteria in order not to delay Action Plans.

32. Consolidating all Action Plans by means of a wrapping up and final confirmation of the following:

- Strategies already implemented
- In process of implementation
- Not started yet during 2003
- Strategies that will be started during 2004.

33. Presentation of High Level Statements and Action Plans by all group leaders during sixth (6th) Workshop enabling maximum participation of all staff possible to ensure:

- Successful implementation of strategic intent
- Buying-in
- Commitment.

34. Implementing of strategies and monitoring by executing strategies in order of priority as reflected in:

- Monthly Objective Sheets
- Individual Work Plans
- Half-yearly Business Planning review assisted by Business Analyst.

35. Evaluating and adjustment of strategies and developing of contingency strategies. See Appendix H: Diagram of the Strategic and Business Planning Process.

36. Securing approval of top management for Business Plan implementation.

37. Drafting of 'Foreword' by Business Analyst and Head: NBRI for Permanent Secretary approval for including in Business Plan.

38. Printing and launching of Business Plan and media coverage as part of free marketing to target groups.

39. Back to step 1.

40. Analysing need for institutional re-positioning which could include options such as the following:

- Re-positioning in MAWRD
- Forming an agency in collaboration with other institutions
- Re-positioning in the public service, e.g.. with the Ministry of Environment and Tourism, Directorate Scientific Services.

41. Identifying other options for re-positioning given the following:

- External developments and trends
- Internal developments and trends
- New issues identified
- Maximum future benefit for enhancing NBRI strategic intent (high level statements).

42. Revision of Business Plan in February 2004 and from then onwards on an annual basis, consider relevance or importance of:

- New issues
- Issues identified previous year for which strategies have not yet been developed
- Current strategies not executed

- Strategies partly executed.

43. Identifying gap between planned and actual strategy implementation. Elements of Strategic Management.

44. Identifying reasons and incorporating institutional learnings in revised Business Plan to reduce gap in future. Analysing similar or international institutions related to NBRI to consider incorporating strategy and institutional changes given regional trends such as:

- Regional trade integration, Carbaugh (2002: 295-297) and Daniels and Radebaugh (2001: 232)
- SA European Free Trade Agreement and impact on SADC countries, Meyer (1999: 10-13)
- New Economic Partnership for African Development (NEPAD), Breytenbach (2002: 151-161)
- African Growth and Development Act, Hormeku (2001: 30)
- Global trends, Dixon (2002: 1-228).

45. Evaluating usefulness of all steps of Business Planning process and critical issues for facilitator to improve upon by all participants:

- Resistance to change
- Overcoming barriers to change
- Establishing meaningful and sustainable change
- Team development curve
- Four elements of organisational and individual renewal.

46. Evaluating of organisational sophistication and need for applying more sophisticated business planning models, e.g. European Business Excellence Model and South African Business Excellence Model.

47. Adjusting NBRI organisational structure to strategy. See Appendix A: The Organisational Structure.

48. Considering the need for compiling a Technology Audit as a planning tool for integrating current and new products and services, current and new markets and current and new technology to ensure products in following phases:

- Starting
- Growth
- Maturity
- Declining
- Entry stage of development to enhance continuous sustainability and pro-active re-positing in anticipating changes.

49. Aligning of Project Research Criteria of NBRI with Project Research Criteria of DART. Refining of project research criteria in process of development for evaluating and prioritising the most appropriate projects for commitment of resources and execution (shifted to 2005 due to over commitment). Considering options such as Cost Benefit Analyses. Testing and confirming validity, mutual exclusiveness and reliability of criteria before implementation.

50. Considering need for vision statement based on crisp slogan and very short utopia, e.g. “Just Do It”. Considering need for expanding Biosystematics End Customer Survey to other Business Areas to establish a baseline of customer satisfaction levels and improving customer satisfaction levels, Irish (2002).

51. Half-yearly review of Business Planning Process during August 2003.

52. Back to step 1 during Annual Review of Business Planning Process. Replacing performance indicators with targets to enable increased accuracy and control of performance.

53. Once a personnel performance measurement system is in place (could be before, during or after institutional repositioning), integration of this with the institutional performance management system of the NBRI (Business Plan that is organisational performance). This could entail the development of key performance indicators

(KPIs) for individual staff to align individual performance with institutional performance.

54. Develop a Learning and Growth Action Master Plan (e.g. Ministry of Mines and Energy) that will enable integrating the following:

- Organisational performance
- Individual performance
- Training Needs Assessment
- Training and Development Plan
- Career Planning.

55. Depending on the outcome of institutional re-positioning, putting measures in place to cater for addressing people's fears during a transition period. Staff need to be informed about all changes on a continuous basis to release anxiety and to prepare for any anticipated changes.

56. Linking the performance and reward systems that will allow for rewarding of individual performance on an output and outcome based performance basis to ensure that the best performers are rewarded.

57. Developing individual performance measures for evaluating managers' contribution towards achieving operating values. The higher the level of manager, the higher the weighting should be as percentage of his/her total individual performance.

58. Aligning all systems, people and processes during the transition period.

59. Half-yearly Business Planning Review for monitoring progress and implementation.

60. Back to step 1 during Annual Review of Business Planning Process.
Consider applying TOWS matrix for issue identification.

61. In addition to the Strategy Checklist Test, execute the following Test for a Winning Strategy:

- Goodness of Fit Test External

  Institution and environment

  Internal: Consistency amongst internal activities
- Competitive Advantage Test

  Having an edge over rivals in attracting customers and defending against competitive forces.
- Performance Test (versus Strategic Intent):

  Financial

  Market

  Strategic.

CHAPTER 13
CRITICAL ANALYSES AND RECOMMENDATIONS

13.1VISION

The vision of the NBRI was not developed due to the initial absence of other high level statements such as mission, objectives and operating values. Once the NBRI has an increased understanding of what the implementation of the business plan entails, staff will be able to formulate an appropriate vision statement. During the annual review of the Business Plan in 2004, consideration should be given to the development of a vision.

13.2PROJECT RISK ASSESSMENT

Risk factors that have been applied in this study are:

- Probability
- Impact
- Achievability.

All three of the above factors could have been more finely categorised as:

- Probable
- Possible
- Unlikely.

A time scale could have been added to these factors, United Kingdom Civil Service College (1996a: 6).

Planning models that were used in this study include:

- Brainstorming
- Delphi-technique
- Strengths, Weaknesses, Opportunities and Threats (SWOT)
- Political, Economic, Social and Technology (PEST)
- Industry Analyses
- Porter's analyses of Five Competitive Forces, Thompson and Strickland (2001: 74-81)
- Weighting and ranking

- Probability analyses.

Models that were considered, but were found to be too unsuitable and/or too sophisticated for the organisational analyses of the NBRI include:

- Boston square matrix
- Gant charts
- Programme Evaluation and Review Technique
- Management by Objectives
- Critical Path Method
- Critical risk summary
- Cost breakeven analyses
- Activity based costing and direct costing, Horngren, Foster and Datar (1997: 4-1)
- Boston square matrix
- Critical risk summary
- Time series analyses
- Regression analyses
- Linear programming
- Decision trees
- Sensitivity analyses, not applied in this study as they are more suitable for highly specific projects
- Monte Carlo simulation, not applied as it is based on probability distributions and these distributions need to be aggregated to provide a probability distribution for the Net Present Value (not realistic to obtain in this case)
- Expected Net Present Value, not applied since it is more suitable for private sector projects, which can be based on estimation of the financial value attached to it
- Coefficient of variables
- Process control method
- Risk portfolios, not applied as they are based on the calculation of expected values, which is not available.
- Register of risks or high-level risk register, not applied as risks were identified and the impact and the manageability, which make a register of risks unnecessary.
- Economic Value Added, not applied since it is based on possible outcomes as presented in a sensitivity analysis and based on a fairly good idea from experience

and systematic post project evaluation, which is not available in the case of the NBRI

- Net Present Value
- Return on Investment
- Modified internal rate of return, Damodaran (1997: 260-281).

In future, risks can be further reduced by applying the following:

- Better procedures
- Better measures of impact
- Better manageability of risks, which will indeed be possible as the NBRI gains experience and confidence in the benefits of the business planning process.

13.3BUSINESS MODELS

13.3.1 European/UK Quality Excellence Model

This model is more sophisticated than the Balanced Score Card Model. However, it is not adequately tailored for the Namibian situation and is also too advanced for implementation atr the NBRI, see Appendix I.

13.3.2 South African Model for Business Excellence Model

A diagram about this model, is presented in Appendix J. Like the European Business model, this model could be effective for the NBRI once the institute reaches the stage of organisational development that requires increased complexity and sophistication.

13.3.3 Balanced Score Card

The Balanced Score Card is very elementary in its approach and does not allow for complexity and sophistication. However, as the NBRI was not previously exposed to business planning prior to this study, the Balanced Score Card is appropriate.

13.4PROJECT RESEARCH CRITERIA

The following project criteria were considered, but, were found to be not suitable for the NBRI:

- Investment appraisal, Damodaran (1997: 160)
- Economic appraisal

- Option appraisal
- Cost benefit analyses
- Cash flows, Damodaran (1997: 194)
- Cost effective studies
- Cost utility analysis, which is based on weighting and ranking.

The project research criteria will be completed during 2005.

13.5ACTION PLANS

A copy of the Business Plan of the NBRI is attached as Appendix K.

13.5.1 Business Process

The NBRI could be transformed into an institution with a gradual and greater autonomy from government regarding operational issues, whilst maintaining a strong partnership with government and specifically the line ministry, MAWRD, on a management level. One option is to create greater awareness on political level to enable increased political support.

Another useful tool that could have been used in tandem with the Information Technology Balance Sheet, De Wet (1999: 1-10) is the Information Technology Space Map, De Wet (1992: 1-12). This tool could be considered for application during the review of the Business Planning Process in 2005.

13.5.2 Customer Satisfaction

Branding of the NBRI, in specifically the entrepreneurial area, is required in order to enable greater capitalisation of research and development of the economic potential of indigenous plant species. Developing and extending of the recent biosystematics customer survey to other business areas should be undertaken on a continuous basis.

Other important areas that need greater focus in future are the following:

- Gradual re-positioning of the NBRI to eventually become an independent institute with increased international and donor funding, whilst becoming less dependant on government funding.

- Market segmentation and target marketing with a focus on entrepreneurs and international donors.

The success of the service can, in future, be assessed in terms of the following:

- Timeliness
- Comparison against standards
- Judgement of peers, internal, external or international
- Comments from satisfied customers
- Customer returns or complaints
- Comparison with other organisations, internal or external
- Compliance with the Total Quality Management ISO 9000 process
- Weighted index of several individual aspects of quality of service, Morris (1998).

Satisfying the above should point to a useful measurement of quality through raising further questions, rather than providing packaged solutions. Another approach is to forget theoretical models and to go straight to a measurement of customer satisfaction. A popular measurement is based on the following:

- Reliability
- Assurance
- Tangibles
- Empathy
- Responsiveness.

13.5.3 Financial

Gradual implementation of a costing system that is based on affordability, with a gradual raising of cost awareness should be considered.

13.5.4 Learning and Growth

The following are critical for future development of the NBRI and staff:

- Participation and ownership of the Business Plan by all staff; and regular information to all staff about any changes
- Mapping of the talent pool in order to match the work levels with human potential.

- Applying tools such as the Initial Recruitment Interview Schedule and the Career Path
- Application Method, Ashton (1998) which identify the following work levels:

  Corporate prescience

  Corporate citizenship

  Strategic intent

  Strategic development

  Best practice

  Service

  Quality.
- The execution of a training needs analysis once the business plan is in the process of implementation. This needs to be integrated with the business planning process
- The development of personal and career development plans based on the business competencies of the NBRI
- The developing and implementing of a government-wide horizontal performance measurement and management system
- The linking of the financial reward system with the performance measurement system
- The development of individual and team performance scorecards that are integrated with the Balanced Score Card.

CHAPTER 14
CONCLUSION

The business model was tailored to meet the unique needs of the NBRI. Various analysing techniques were considered as part of the critical analyses. Issues that were identified were limited to only ten per Balanced Score Card area. This was done not to over-commit staff. The approach was conservative to ensure that as many strategies as possible are implemented. Over-commitment to too many issues and strategies, especially during the initial stages of the business planning process, may overwhelm staff and become a burden over and above routine operations. The outcome may be that staff became negative if strategies are not implemented.

The process was comprehensive and thorough and laid the foundation for ongoing changes as anticipated in the recommendations. Development of staff, processes and systems were combined and integrated during a two-year period. This period allowed for the changing of people's attitudes and coping with new issues. Sustainable change is embedded in the strategies that were already implemented. Momentum needs to be maintained on a continuous basis to make change management part of the new culture and not to revert back to old ways. Total integration of people, processes and systems will be possible when individual performance and remuneration can be linked with the Balanced Score Card system. This will be a probability with a high degree of certainty if the NBRI becomes a semi-independent institution, which is a current option that is being considered by the Ministry of Agriculture, Water and Rural Development.

The Head of the institute is an inspirational leader with integrity, trust and honesty that cultivates a team spirit of professionalism, progressiveness and openness to new ideas. Continuity of the current leader for at least another three years will be extremely important for empowering the next layer of management to embrace changes as part of the new culture.

Provided that a number of critical success factors are managed, as described above, and the quality of committed staff is retained, the NBRI has the potential to be the leading institution in the Public Sector, with regard to change management and practising innovative business practices. It is gratifying to have played a small role in the

development of this dynamic institution, with the continued facilitation in the development of the project research criteria and the six-monthly review of strategies is anticipated to be equally fulfilling.

The continued evolution of the NBRI hinges on the will of the MAWRD and other authorities to recognise the issues, challenges, plans and future direction of NBRI, as determined during this study, and agreed upon by all parties concerned in its Strategic and Action Plans. In these plans lie the key processes and actions for success covering:

- The Vision
- Clear Objectives
- Strategies or Road Map to Get There
- Action Plan and Execution
- Review
- Sustainability.

What is needed is the collective will to push through with the right leadership at the helm, supported by relevant resources and also willingness to grant a high level of autonomy, backed by an entrepreneurial vision, to allow NBRI to be perhaps self-sustaining and a shining example to other African 'green' establishments. Thus, the momentum towards change, functionalism and commercialism should be sustained. NBRI has bought the Vision. The Challenge is to keep it going and fine-tuning along the way.

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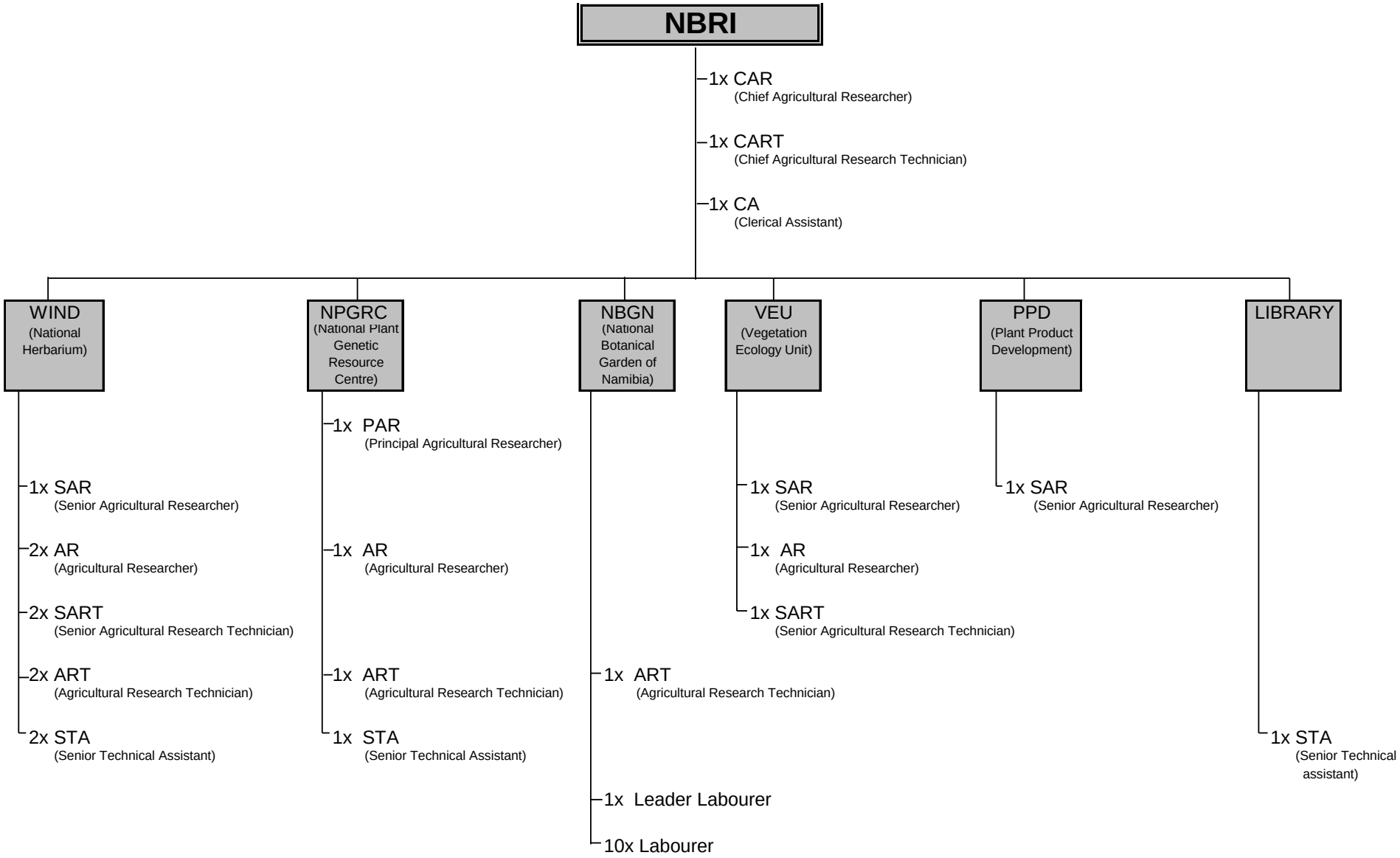
Appendix A
Organisational Structure NBRI



Appendix B
Terms of Reference

Background

As a government unit, the MAWRD undertakes to promote sound socio-economic development through the promotion and facilitation of environmentally sustainable development, management and utilization of water and agricultural resources. This complex responsibility is further broken down into long to mid-term objectives distributed between the two main departments of the ministry, viz. the Departments of Water Affairs, and Agriculture and Rural Development. The National Botanical Research Institute, a subdivision of the Directorate of Agricultural Research and Training of the Department of Agriculture and Rural Development, whose mission includes, to contribute to food security in the country, is important to the realization of the overall objective of the Ministry.

The recently completed Ministerial Strategic Plan sets out long-term plans and strategies on how the Ministry plans to get to further highs. The plan calls for integrated and effective strategies on lower levels of the Ministry. Following these developments, the NBRI asked the Consultancy Services Division of the Office of the Prime Minister to facilitate the drafting of a strategic plan with the aim of making the institute more focused and functional.

The Purpose and Scope of the Project

The project lays the foundation for planning in the subdivision. It seeks to identify strategic factors, internal and external elements that determines the operations and management thereof, spells out the process by which policies and strategies will be put into action and identifies ways in which subdivisional activities and performance will be compared with desired performance.

The project is aimed at making the institution more functional and better focused – this entails conducting a stakeholder review and thorough assessment on who exactly are the current stakeholders and clients or potential stakeholders and clients of the institute, review internal planning, and evaluation processes and mechanisms.

Methodology

The staff of the Institute will develop the plan, thus ensuring ownership, and the staff of the Consultancy Services Group will facilitate the process. The project will start with

information gathering, followed by a workshop aimed at reviewing high level statements, viz. the mission, objectives and core values; and issue identification (Strategy formulation). Thereafter, the process will proceed with articulation of issues, followed by a second workshop on presenting and agreeing on the revised high level statements and articulated issues; as well as developing the options for the agreed issues and deciding on the most appropriate options. The project will also put in place measures and ways for evaluation and control of the strategic planning and management processes and operations of the subdivision, thus ensuring desired outcomes.

The final output will be the drafting of a Strategic Plan by the NBRI in line with the preparatory work and planning framework as facilitated during the first two workshops.

Outputs and Target Dates

- Initial Meeting with sponsor Gillian Maggs-Kölling 12/02
- Information gathering 23/02
- Draft Terms of Reference 21/ 03
- Final Terms of Reference 7/03
- Preparation for 1st Workshop
  - Agree on participants: all staff
  - Agree on venue: NBRI
  - Draft workshop programme 02/03
  - Agree on programme with sponsor and programme manager 09/03
  - Issuing of Final Workshop Programme 15/03
  - Arrange equipment 2/04
- 1st Workshop 10/04
  - Follow similar steps to 1st Workshop
- 1st Workshop Report 17/04
- 2nd Workshop 5/06
- 2nd Workshop Report 12/06
- 1st Draft of Strategic Plan 3 /07
- 2nd Draft of Strategic Plan 24/07
- Submission of Final Draft to Senior Management 07/08
- Implementation of High and Medium Priority Areas of Strategic Plan 07/08
- Annual evaluation of expected and actual performance

- Annual revision of high level statements and issues
- Annual revision of Strategic Plan

Team Members

- Gillian Maggs-Kölling
- Johan Coetzee
- Kennedy Mbangu
- Bernhardt Kukuri
- Team coordinators will be identified during 1st Workshop and 2nd Workshop

Roles and Responsibilities

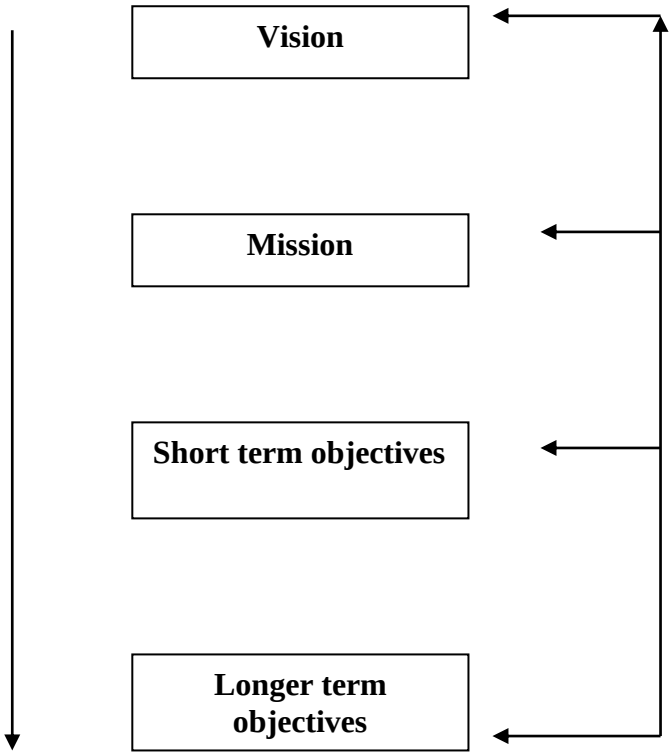
Roles and responsibilities of the sponsor are to:

- Identify expectations during initial meeting with CSG
- Agree on a Final Terms of Reference
- Inform Senior Management of the Ministry and subdivisional staff about the progress and expected changes of the project to ensure ownership.
- Act as Implementation Manager
- Monitor the progress of the project.

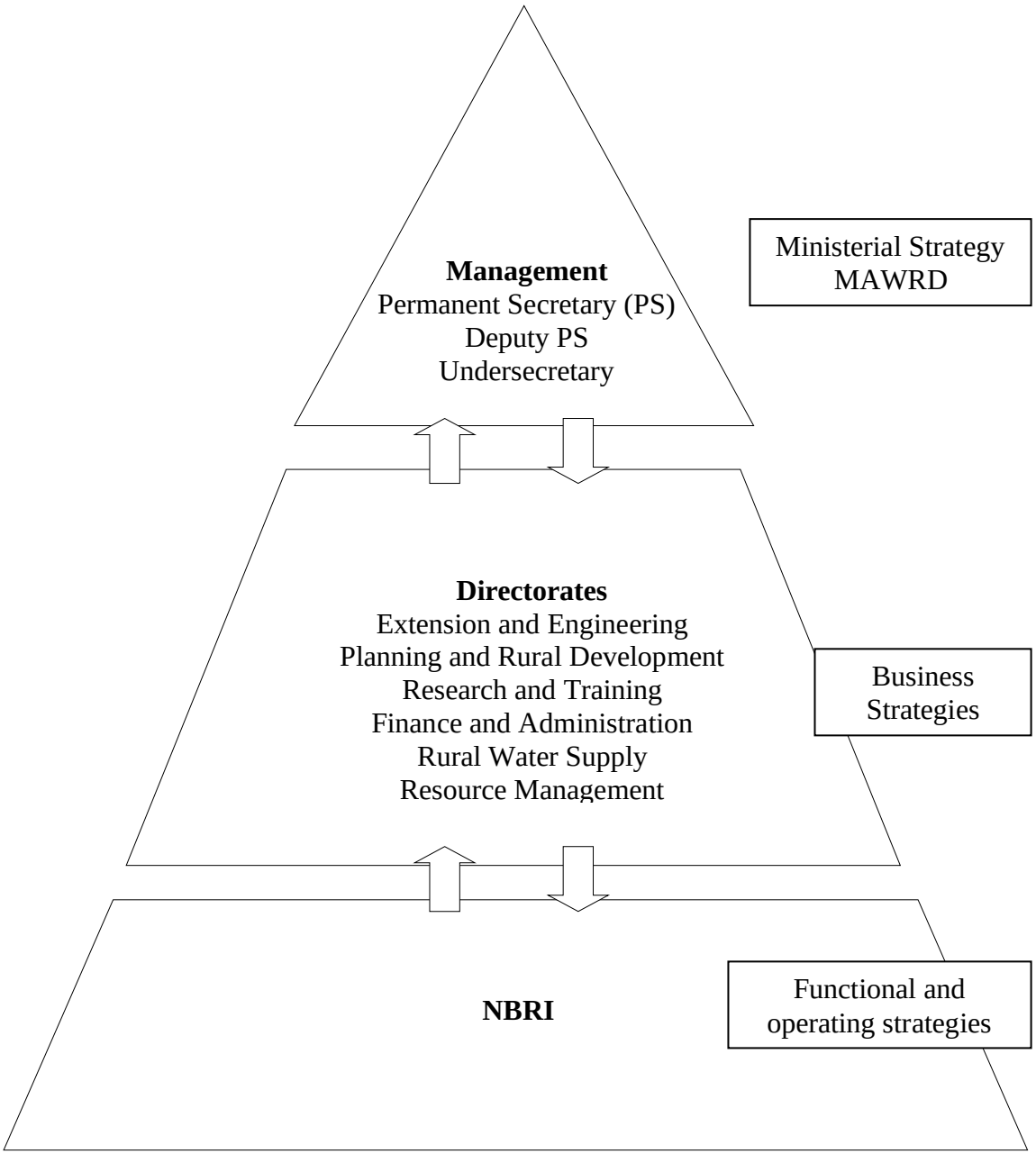
Roles and Responsibilities of CSG are to:

- Draft Terms of Reference
- Facilitation of the process.

Appendix C
Strategy Formulation Process

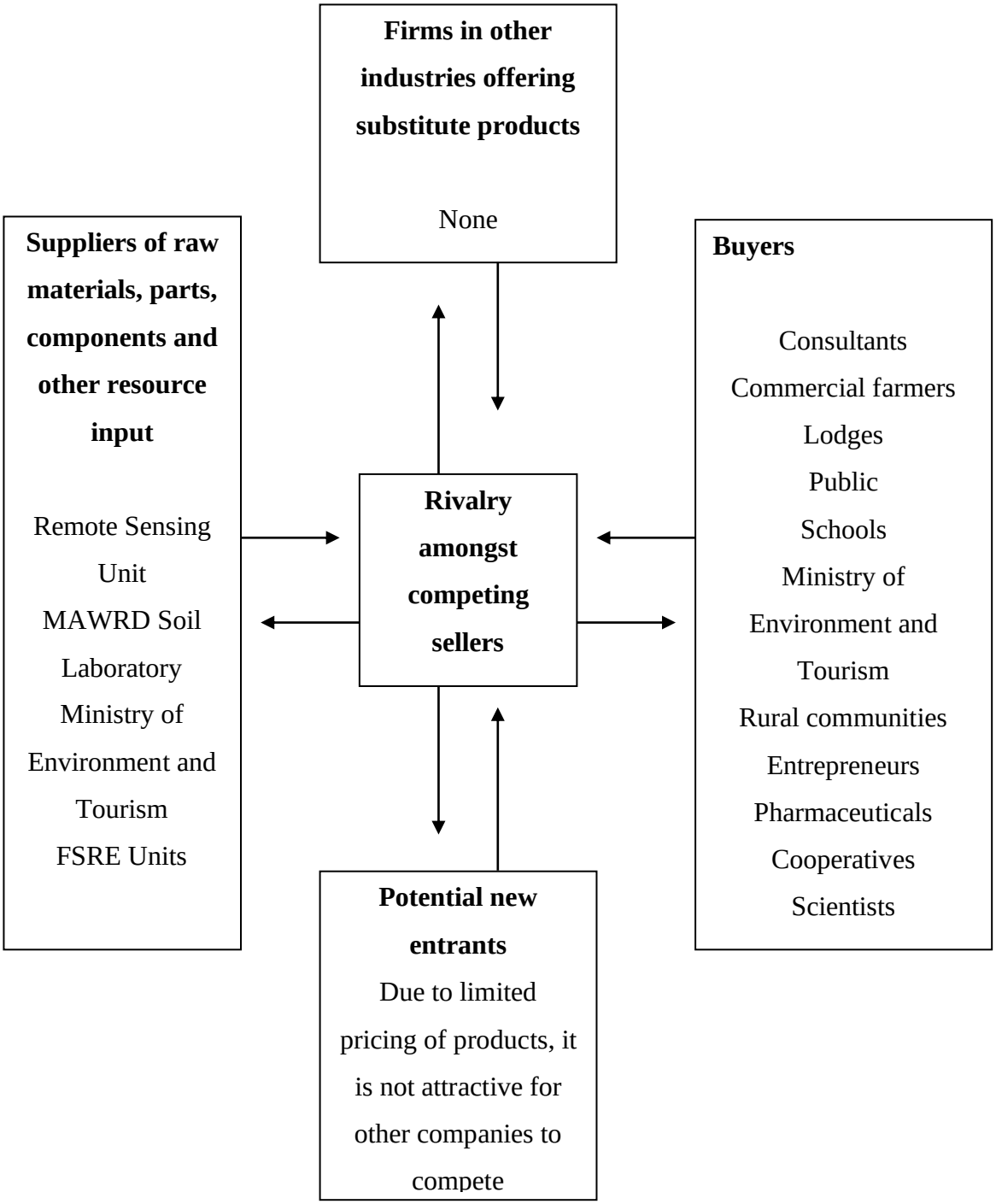


Appendix D
Strategy Pyramid

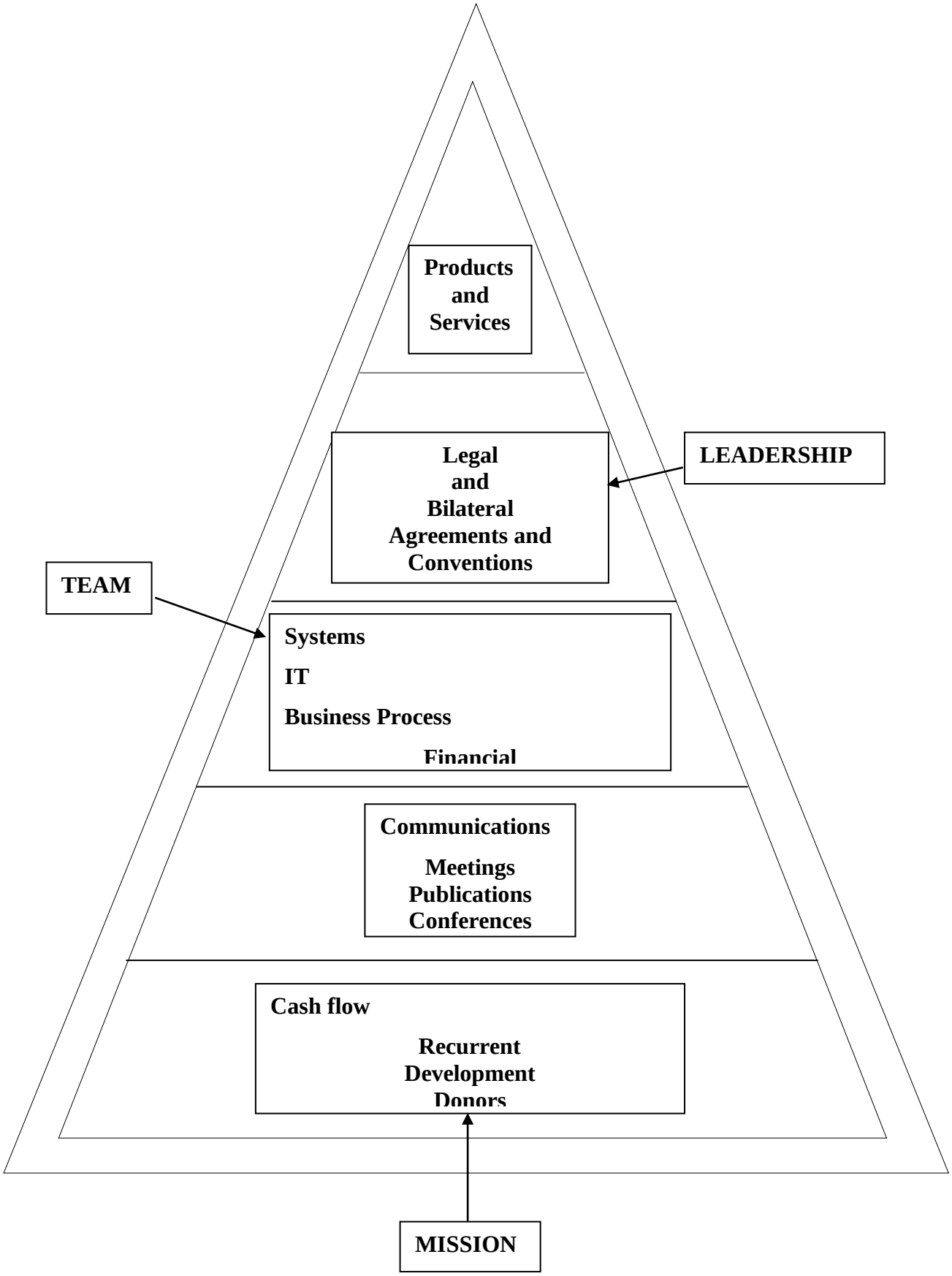


Appendix E
Industry Attractiveness

Test	Snapshot
Market size	About 2 million people in Namibia, relatively small compared to RSA
Projected growth	Population growth rate 3.7%
Intensity of competition	Medium
Emerging opportunity	Research economic potential of indigenous plant species
Emerging threats	Understanding of needs of end customers
Seasonal and cyclical factors	Climate and rainy season, unable to execute field trips.
Resource requirements	Dependent on MAWRD and donor funding
Cross-industry strategic fits and resource fits	MAWRD, and Ministry of Environment and Tourism and Ministry of Mines and Energy
Industry profitability	High profit margins in private sector specific to pharmaceuticals and entrepreneurs
Social	Poverty, most rural communities cannot afford basic services, therefore services such as water and electricity are subsidised. Low awareness levels about economic potential of plant species. HIV/AIDS infection rate extremely high
Political	Stability
Economical	Skewed income distribution levels
Regulatory	Operate within boundaries of the Namibian Constitution, corporate responsible company with high integrity
Environmental	Global warming will affect export agricultural products and have a severe impact on the environment and agricultural potential in twenty to thirty years time.
Industry uncertainty and business risk	Low industry uncertainty, highest business risk is succession planning and retaining intellectual property

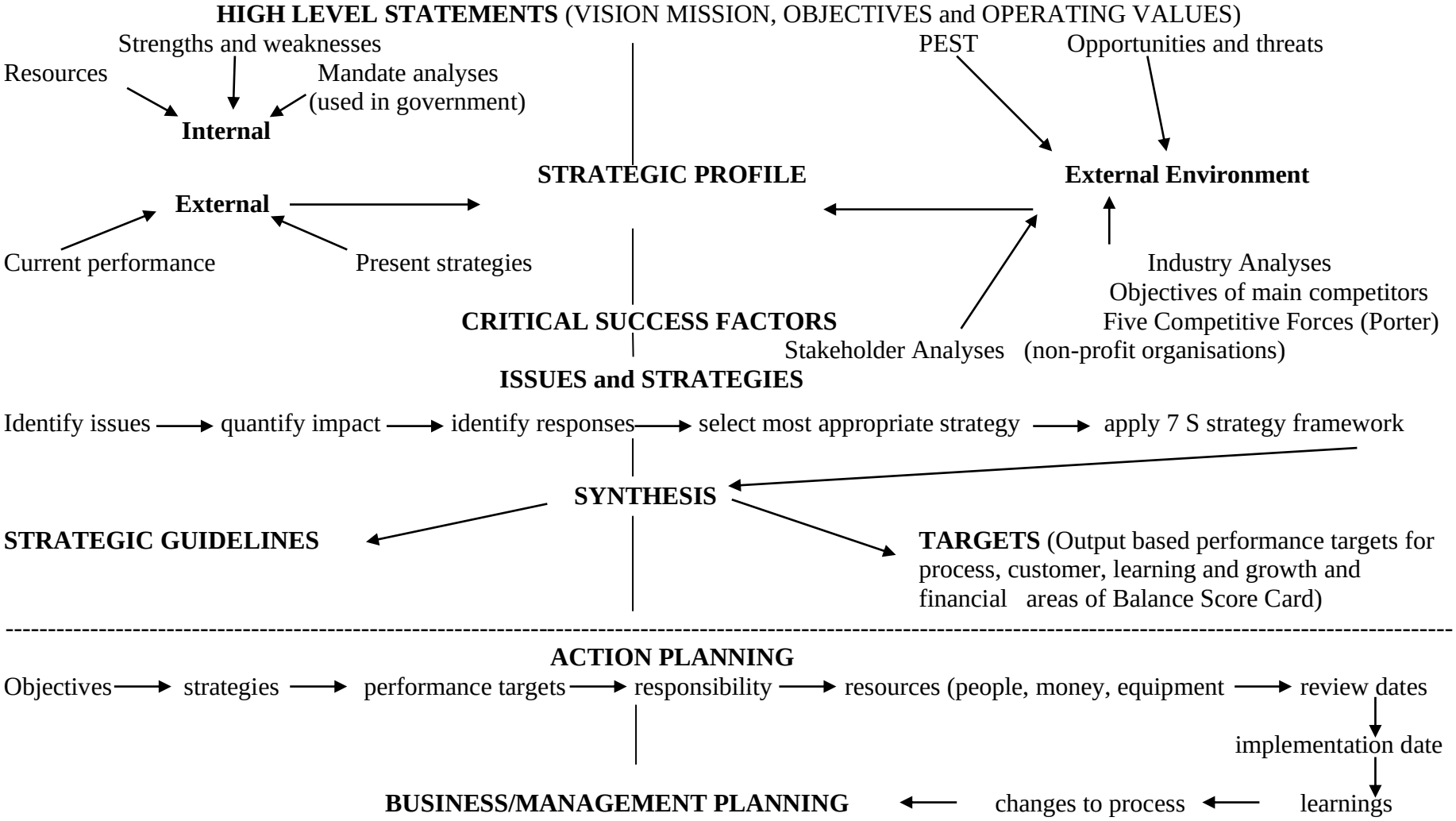

Firms in other industries offering substitute products
None
Suppliers of raw materials, parts, components and other resource input
Remote Sensing Unit
MAWRD Soil Laboratory
Ministry of Environment and Tourism
FSRE Units
Rivalry amongst competing sellers
Buyers
Consultants
Commercial farmers
Lodges
Public Schools
Ministry of Environment and Tourism
Rural communities
Entrepreneurs
Pharmaceuticals
Cooperatives
Scientists
Potential new entrants
Due to limited pricing of products, it is not attractive for other companies to compete

Appendix G
NBRI Investor Triangle

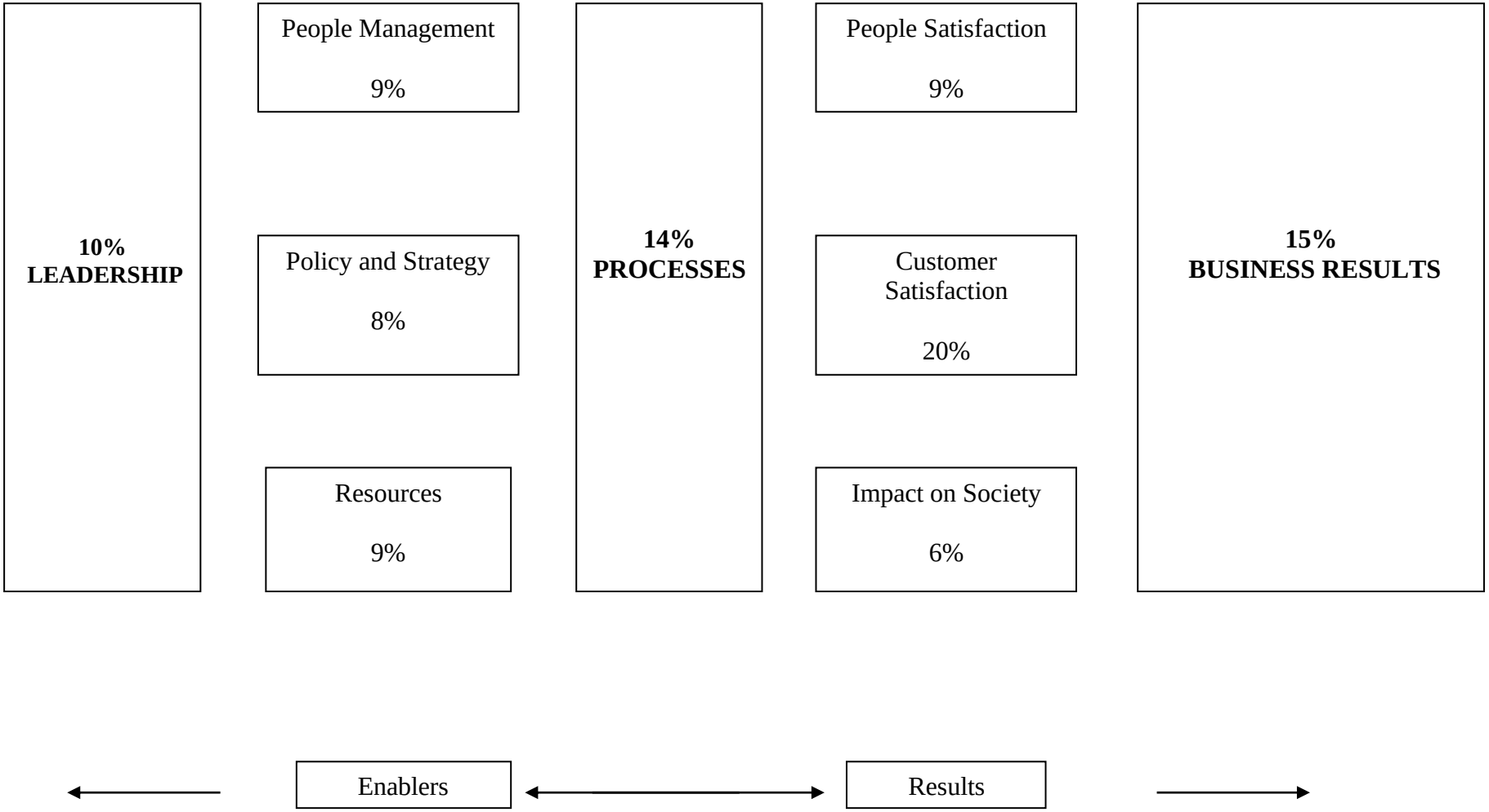


Appendix H

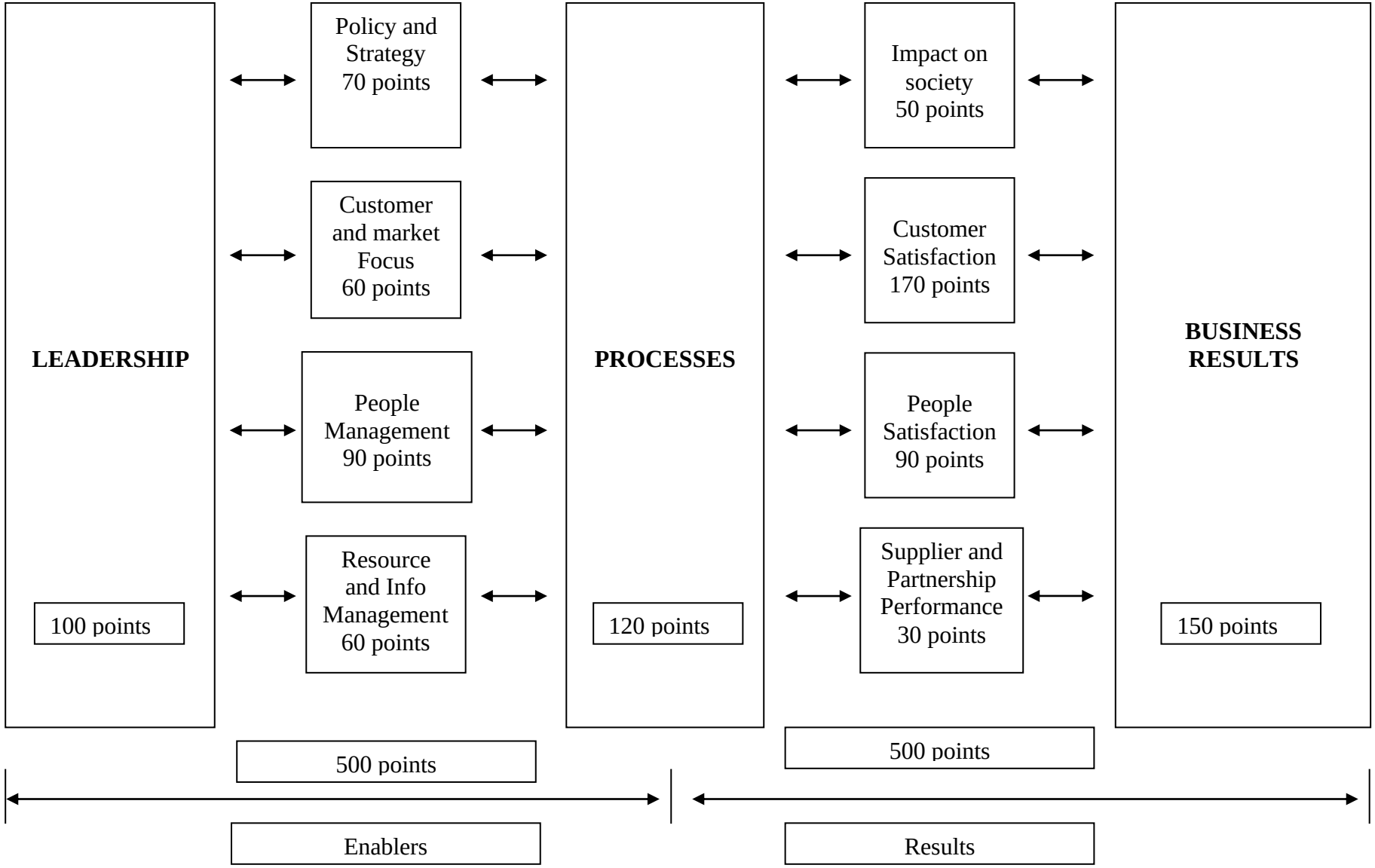
Diagram of Strategic and Business Planning Process



Appendix I
European/UK Quality Excellence Model



Appendix J
South African Model for Business Excellence



BUSINESS PLAN

2003

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This Business Plan is the joint product of the National Botanical Research of Namibia and the Southern African Botanical Diversity Network (SABONET) and was made possible through support provided by the Global Environment Facility (GEF)/United Nations Development Programme (UNDP) and the United States Agency for International Development (USAID)/World Conservation Union – Regional Office for Southern Africa (IUCN-ROSA) and the Government of the Republic of Namibia.

BUSINESS PLAN

2003

National Botanical Research Institute

Compiled by Johan J Coetzee and the NBRI team

Facilitated by

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Sponsored by

FOREWORD

In the context of an increasingly globalising world, it is recognised that a fully professional public service is needed if the Namibian Government and people are to meet the challenges of the 21st century. Heeding this call, the National Botanical Research Institute (NBRI) has embarked on an exercise to develop an appropriate management strategy for this facility. This strategy aims to be more responsive to the botanical needs and priorities of the users, to maximise utilisation of available resources, and allow for development of staff to enhance their skills and abilities, while maintaining quality of professional service equitable to leading international botanical institutions.

This business plan was developed within the framework of the Strategic Plan of the Ministry of Agriculture, Water and Rural Development and the Business Plan of the Directorate of Agricultural Research and Training, through a series of in-house workshops and meetings initially facilitated by the Office of the Prime Minister. The Southern African Botanical Diversity Network (SABONET) Project provided additional support to finalise the process, yet again underscoring a commitment to capacity building and empowering of botanical institutes within the southern African region. The plan clearly sets out in operational terms what must be done over the next 12-month period to attempt to achieve the overall mission of the NBRI.

If staff members are required to implement this plan, their involvement in its development is imperative. The active participation of staff at all levels was encouraged, allowing them to now take ownership and responsibility for the implementation of this plan. The plan contains all the elements that form the basis of creating a high performance institute. It will be gratifying to observe that its implementation will contribute to the achievement of our common goal, encapsulated in Vision 2030.

Mr. Kahijoro S. M. Kahuure
Acting Permanent Secretary: MAWRD

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Staff members no longer in the service of NBRI

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Table 3: Financial Action Plan

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APPENDIX B: BUSINESS PLANNING SEQUENCE

APPENDIX C: DIAGRAM OF STRATEGIC/BUSINESS PLANNING PROCESS

INTRODUCTION

The National Botanical Research Institute (NBRI) is a subdivision within the Directorate of Agricultural Research and Training of the Ministry of Agriculture, Water and Rural Development (MAWRD). Established in 1953 as the SWA Herbarium, the institute has expanded since Independence in 1990 to include the following sections:

- National Herbarium of Namibia (WIND)
- National Plant Genetic Resources Centre (NPGRC)
- Vegetation Ecology Unit (VEU)
- National Botanic Garden of Namibia (NBGN)
- MAN Müller Reference Library
- Plant Product Development is planned and staff members need to be recruited, see Appendix A for the Organisational Structure.

The NBRI is recognised as a regional centre of excellence for botanical research, and is currently involved as a partner in several international initiatives. In addition, the NBRI backstops various line ministries and other national stakeholder groups from a botanical perspective.

Recognising the need for a proactive approach, the NBRI requested the Consultancy Services Division of the Office of the Prime Minister (OPM) to facilitate the strategic plan drafting process with the aim of making the institute more focused and functional. The process started during the first quarter of 2001. When the facilitator left the OPM end of January 2002, a number of reasons contributed to a lapse in the momentum of the process. During November 2002, the author was approached by the NBRI to assist with the completion of the Business Plan and the Project Research Criteria. The latter developed as part of the process of quantifying the demand and internal capacity of the NBRI, and was not part of the original Terms of Reference.

During the business planning process, staff indicated that –

- the institute is marginalised in the planning and management of the MAWRD
- customer issues are of paramount importance for the survival of the NBRI, with specific mentioning of a customer refocus strategy

- the institute wants to improve its performance.

HIGH LEVEL STATEMENTS

MISSION

The mission is the reason for the existence of an organisation that provides direction as to what should be done at the 'now' and in the 'future'.

Originally, four alternative missions were articulated and presented during the 1st Workshop. One of the missions was adopted and amended, and referred to a project team to make final amendments. During the 2nd Workshop, the refined mission was presented and mutually agreed upon by all team members of NBRI. For a step-by-step sequence of the Business Planning Process, see attached Appendix B.

The mission of the NBRI is:
To promote the understanding, conservation and sustainable use of Namibian plants for the benefit of all.

OBJECTIVES

Objectives, also known as 'core objectives', provide more specific direction than the mission about the future.

Four groups have been provided the opportunity to formulate and present objectives. During the presentations it became clear that the NBRI has been very much process orientated and in this sense lopsided as to not adequate focus on other areas of the business. The facilitator introduced the Balanced Score Card, to cover not only for the Business Process, however, also the Customer, Financial and Learning and Growth areas. This approach is in line with the level of understanding of team members of the NBRI as well as with approval of management of the Ministry of Agriculture, Water and Rural Development.

Objectives of the NBRI are as follows:

Business Process

To collect and maintain plant material and data according to international standards, collaborating with external organisations and programmes where appropriate.

Customers

To provide high quality, efficient services through needs-driven, plant-related research.

Financial

To promote cost awareness and the careful and efficient utilization of funds.

Learning and Growth

OPERATING VALUES

Operating values of the NBRI are:

- Professionalism
- Commitment
- Progressiveness.

BALANCED SCORE CARD

DESCRIPTION

The Balanced Score Card system directs the activities of the organisation to a defined set of objectives and provides a framework for identifying, articulating, measuring and monitoring the behaviours paramount for organisational and individual success.

PURPOSE AND BENEFITS

The balanced score card has been chosen as the approach to improve performance since its benefits are, amongst other, the following:

- Translates strategy into action
- Enables improved communication
- Alignment of the organisation and its strategy with its environment and performance
- Provides focus to the NBRI.

AREAS/QUADRANTS

The Balanced Score Card focuses on the following four areas/quadrants, namely:

1. Business Process
2. Financial
3. Customer Satisfaction
4. Learning and Growth.

Following the development of the high level statements, external and internal analyses were undertaken, and strategic issues identified and prioritised in terms of the four areas of the Balanced Score Card.

1. Business process refers to the following:
   How effective are the key business processes?
   At what must we excel to achieve the mission?

2. Financial refers to:
   What must we do to succeed financially?

3. Customer satisfaction refers to:

   How should the NBRI appear to its customers to achieve the mission?

4. Learning and growth refers to:

   How will the NBRI sustain its ability to change and improve to achieve its mission?

KEY FACTORS IN EVALUATING BALANCED SCORE CARD SYSTEMS

The following key factors are important in evaluating Balanced Score Card Systems, namely:

I. Develop and communicate the strategy.
II. Flexibility to change measures as the business changes.
III. Data availability from different operational systems.
IV. Visibility to all staff and acceptance.
V. Adjustment to individual organisational requirements.

I. Develop and communicate the strategy

This requirement was met as all staff was involved in articulating and communicating the issues and the strategies developed.

II. Flexibility to change measures as the business changes

This is possible, as all strategies require different performance measures that are unique for successful implementation.

III. Data availability from different operational systems

For proper capacity and demand management, it is required that the NBRI keeps record in future of all performance and financially related information that will enable developing a baseline, and planning realistic and attainable targets and unit costs.

IV. Visibility to all staff and acceptance

The NBRI must ingrain the Balanced Score Card as part of the company culture to influence staff behaviour and activities. This is essential for the development of Project Research Criteria based on the Balanced Score Card.

V. Adjustment to organisational and individual requirements

The Balanced Score Card was adjusted to meet the unique needs of the NBRI. The business performance of the NBRI needs to be directed in future by the activities of an integrated project planning and management system that compliments the Balanced Score Card system.

EXTERNAL ENVIRONMENT

ENVIRONMENTAL SCANNING

The process used was 'environmental scanning', which refers to the process dealing with the measuring, projection and evaluation of change in the different environmental variables.

PEST ANALYSES

The following issues were allocated to a group (four people) for brainstorming and presentation to all staff of the NBRI, namely:

- Political
- Social and Environmental
- Economical
- Technological.

See attached Appendix C for a Diagram about the Strategic/Business Planning Process.

INTERNAL ENVIRONMENT

STRENGHTS, WEAKNESSES AND THREATS

NBRI staff was divided in two groups and each group was tasked with brainstorming one of the following areas:

- Strengths
- Weaknesses
- Threats.

The process used to identify the above mentioned issues is what is known as the SWOT analysis. The three major categories which have been assessed are the following:

a. Resources (inputs)

b. Present strategy (process)

c. Performance (outputs).

a. Resources include the following:

- People
- Economic
- Information
- Competencies

b. Present strategy refers to:

- Overall strategy
- More specific or functional strategies.

c. Performance refers to:

- Output and outcome based performance
- The track record of the NBRI.

ISSUES, RESPONSES AND STRATEGY

ISSUE IDENTIFICATION AND IMPACT

Strategic issues are fundamental policy questions affecting the NBRI's:

- mandate
- mission
- operating values
- product or service level and mix

- customers
- cost
- funding
- management and organisational design.

An issue can be any of the following that impacts on the NBRI, namely any:

- development
- event
- cabinet decision
- trend
- factor
- force.

DEVELOPING RESPONSES AND STRATEGIES

A response is a plan of how to attain objectives, answering the questions of how, where and when and, consists of the following elements:

- **Scope**, referring to products, services and markets
- **Resources**, covering funding, equipment, material and staffing
- **Competencies**, which refers to uniqueness
- **Synergy**, which refers to the added advantage from a combination of resources.

In this study process, responses refers to strategies that have been developed for issues prior to the prioritising of the most important issues and strategies for developing an action plan.

SCORING AND PRIORITISING OF ISSUES AND STRATEGY

A seven-point scoring system was used to score impact of issues and achievability of responses. The seven-point scoring system is widely used in performance assessment of individuals and has been regarded as providing a useful tool for scoring.

After multiplying the scores of impact and achievability, the issues having the highest scores were listed in priority order. Due to the vast number of issues and the limited capacity of the NBRI to address all the issues, only ten were selected. These were

representative of all four areas of the Balanced Score Card, not selecting only those with the highest scores, which would have kept the NBRI locked into the problem of focusing too much on the business process issues.

BUSINESS PROCESS

The business process of the NBRI is based on sound scientific research principles, an area which is undoubtedly one of its strengths. The scientific standing of its researchers and thus also the NBRI is recognised internationally. During the issue identification process, it became clear that most of the 33 issues listed represent the business process area. See **Table 1: Business Process Action Plan.**

CUSTOMER SATISFACTION

Hearing the call for being more responsive to customer needs and marketing the NBRI, outreach actions have been developed. Customer satisfaction levels for the Biosystematics component have been determined during an End User Workshop. The latter will be extended on an annual basis to other components. See **Table 2: Customer Satisfaction Action Plan**.

FINANCIAL

Irrespective of the financial constraints of the financial system, various actions were developed of which some have already capitalised. See T**able 3**: **Financial Action Plan**.

LEARNING AND GROWTH

The term learning and growth include development of people and the institute to its optimum potential. As a learning institution, the NBRI will be more proactive in future and

embrace changes on a continuous basis and. See **Table 4**: **Learning and Growth Action Plan**.

WAY FORWARD

In implementing the Business Plan, issues will be identified which will be addressed. The following issues have already been identified.

VISION

The vision of the NBRI has not been articulated. However, during the annual review of the business plan in 2004, serious consideration should be given to the development of a vision.

BUSINESS PROCESS

Development of the NBRI to be transformed into an institution with greater autonomy.

FINANCIAL

Implementation of a costing system that is based on affordability and determining of unit costs.

CUSTOMER

Branding of the NBRI name in specific the entrepreneurial area to enable greater capitalisation of research regarding the economic potential of indigenous plant species.

LEARNING AND GROWTH

Development of people. Participation and ownership of the Business Plan by all staff; and regular information to staff about any changes.

CONCLUSION

The NBRI team would like to thank all those individuals who have played a role in the development of this Business Plan. We are committed to continue with the process based, on the actions already implemented.

Table 6.1: Issue Identification

Issue	Description	Impact/Importance	Status	Stakeholders	Strategies
Lack of common goal	There is a lack of a common goal and a need exists to clarify objectives.	Own agendas No high-performing team Lowers potential for outside funding Unprofessional image (**6**)	Decreasing– initiated strategic planning process + team development	Customers NBRI Donors GRN	Develop and implement a Business Plan
Ineffective management	Poor planning, monitoring and evaluation of activities and staff performance typifies current management style	Own agendas No high-performing team Lowers potential for outside funding Unprofessional image Insubordination Reduces efficiency (**6**)	Decreasing	Customers NBRI Donors GRN	Influence and steer senior management to: Develop measures for project evaluation and Identify performance measures for reporting on project performance.
Poor communication	Effective communication,	Poor pr Disgruntled/	Decreasing – recent efforts (MOS) have	Customers Management	Create an understanding for

Table 6.1: Issue Identification

Issue	Description	Impact/Importance	Status	Stakeholders	Strategies
	fundamental to efficiency and appreciation of NBRI functions, needs to be improved at all levels	uninformed staff Mistrust No co-operation Low efficiency Little appreciation Management unclear of functions (**6**)	improved sectional communication	NBRI GRN	customer perceptions. Develop, publish and implement an NBRI Customer Charter and Complaint System. Develop an aggressive marketing strategy for making senior management and parliamentarians aware of the value of NBRI specific to rural customers.
Cost Recovery	The general trend is to charge for technical services	Basic services will continue Loss of potential	No mechanism exists Feasibility being explored	NBRI Customers MAWRD/GRN	Determine unit cost of services provided based on criteria to

Table 6.1: Issue Identification

Issue	Description	Impact/Importance	Status	Stakeholders	Strategies
	and there are various possibilities in the NBRI.	income, motivation will not improve, not in line with standard practice, Product perceived to be less valuable to user (**4**)			be developed (such as recovering minimum costs)
Outside funding	Following CBD, funding has increased for plant biodiversity-related activities. However, donor interest is changeable and sustainability of equipment and staff needs to be addressed	Basic services will continue Some projects may not be sustainable Upgrading of IT jeopardized Additional project-funded staff lost New activities cannot be considered (**3**)	Uncertain	Customers NBRI Donors MAWRD/GRN	Develop criteria for long term sustainability of projects Get approval for applying criteria
Financial resources/ Operating funds	Inflation and falling exchange rates will	Drop in living standards of staff.	Ongoing, Becoming critical	NBRI Customers	Develop customer focused services of

Table 6.1: Issue Identification

Issue	Description	Impact/Importance	Status	Stakeholders	Strategies
	increase financial constraints. These effects will be compounded when coupled with ministerial budget cuts.	Possible retrenchments Research activities will be reduced Less funds for basic commodities like stationery (**6**)		MAWRD Suppliers	which the output is measurable
Poor salaries	Loss of staff and problems with recruitment become a constraint when salaries remain below market (acceptable) levels	Tasks not accomplished Unable to expand activities Continue to lose staff Unable to recruit suitable new staff members Frustration, low morale (**5**)	Ongoing, becoming critical	Customers NBRI GRN	Explore development and growth opportunities Explore opportunity of linking with University to get students to do occasional work for the NBRI Explore the opportunities of giving staff non-financial rewards

Table 6.1: Issue Identification

Issue	Description	Impact/Importance	Status	Stakeholders	Strategies
					such as time-off Explore opportunities requesting donor assisted projects to sponsor outstanding achievers for further studies
Plants with economic potential	Many Namibian plant taxa have economic potential and should be proactively promoted for development.	Lack of income for Namibia Mankind could lose out, e.g. possible cures for diseases NBRI perceived as not contributing to NDP II objectives Value of indigenous plant species remains underestimated Over-utilisation	Emerging – no access legislation in place but policy currently being drafted	GRN Custodians of resources Mankind Private sector, e.g. pharmaceutical companies	Identify plants with economic potential for commercial and communal customers and get these projects funded as soon as possible

Table 6.1: Issue Identification

Issue	Description	Impact/Importance	Status	Stakeholders	Strategies
		could lead to extinction in certain species. (**5**)			

Table 6.2: Internal Weaknesses

Issue	Description	Impact/Importance	Status	Stakeholders	Strategies
Lack of common goal	There is a lack of a common goal and a need exists to clarify objectives.	Own agendas No high-performing team Lowers potential for outside funding Unprofessional image (**6**)	Decreasing– initiated strategic planning process + team development	Customers NBRI Donors GRN	Develop and implement a Business Plan
Ineffective management	Poor planning, monitoring and evaluation of activities and staff performance typifies current management style	Own agendas No high-performing team Lowers potential for outside funding Unprofessional image Insubordination Reduces efficiency (**6**)	Decreasing	Customers NBRI Donors GRN	Influence and steer senior management to: Develop measures for project evaluation and identify performance measures for reporting on project performance.
Poor communication	Effective	Poor pr	Decreasing – recent	Customers	Create an

Table 6.2: Internal Weaknesses

Issue	Description	Impact/Importance	Status	Stakeholders	Strategies
	communication, fundamental to efficiency and appreciation of NBRI functions, needs to be improved at all levels	Disgruntled/ uninformed staff Mistrust No co-operation Low efficiency Little appreciation Management unclear of functions (**6**)	efforts (MOS) have improved sectional communication	Management NBRI GRN	understanding for customer perceptions. Develop, publish and implement an NBRI Customer Charter and Complaint System. Develop an aggressive marketing strategy for making senior management and parliamentarians aware of the value of NBRI specific to rural customers.

Table 6.3: Threats

Staff turn-over					
Description	Significance/impact	**3**	Status	Stakeholders	Strategies
Inadequate financial incentives and limited promotion possibilities lead to staff seeking better opportunities elsewhere	♦ Staff turnover <10%		Inflation is increasing, salaries not	Staff; Taxpayers; Unions and OPM; Private sector	Explore development and growth opportunities Explore opportunity of linking with University to get students to do occasional work for the NBRI Explore the opportunities of giving staff non-financial rewards such as time-off Explore opportunities requesting donor assisted projects to sponsor outstanding achievers for further studies
Staff shortage					
Description	Significance/impact	**6**	Status	Stakeholders	Strategies
An increasing demand for services and inadequate structures for appointing the required staff and	♦ Less than 50 % of work time is spent on research or botanical-technical work ♦ Staff is required to		Bad and getting worse	NBRI staff, general public, collaborators; customers in general; MAWRD-management; job-seekers	Explore the option of appointing an office administrator funded by a donor agency for a specified period of time Contracting out the marketing function of the NBRI to Marketing Agency whom

Table 6.3: Threats

increased administrative duties of senior staff lead to a too heavy workload. The lack of posts and suitable candidates exacerbates the problem.	be "Jack-of-all-trades", having to have knowledge about a wide variety of fields.			NBRI pays on a % of donor funds secured
Staff relationships				
Description	Significance/impact **6**	Status	Stakeholders	Strategies
Poor communication (all levels), disrespect and in-house strife compromises the effectiveness of the NBRI.	♦ Poor collaboration between different disciplines (sections), leading to duplication of work and/or poor performance ♦ Poor relations between staff members leads to	Was **REALLY** bad a year or two ago, improving slightly at present, but still highly inconvenient.	NBRI-staff; general public; external collaborators	Developing non-financial incentives for performing as a team for example Best Performing Team Award based on predetermined criteria and an official and multi-media press release. Team building events

Table 6.3: Threats

	demoralising work atmosphere				
Funding security					
Description	Significance/impact	**4**	Status	Stakeholders	Strategies
No economic justification to fund NBRI by government due to other development priorities	♦ Future funding, especially for capital items (new vehicles, computers, sophisticated equipment) unsure and at present already often lacking		Still fairly secure	MOF and NPC; MAWRD management; NBRI-staff	Identify plants with economic potential for commercial and communal customers and get these projects funded as soon as possible

Table 6.4: Technologies and Developments

Computerisation					
Description	Significance/impact	**5**	Status	Stake-holders	Strategies
Latest technology for the maintenance and compatibility of electronic information is essential	♦ Better communication ♦ Better data storage and retrieval procedures ♦ Better data processing and exchange possibilities ♦ Dependency on computer systems: System failures! ♦ "State of the Art" - if we do not use the latest data processing programmes, our info generated is not accepted as "good"/		Fairly up to date Depending on future funding and priorities, situation might deteriorate drastically over next 5 years	NBRI staff; MAWRD management and IT Committee; Customers; OPM –Information Systems; Computer technology developers	In the absence of a cost recovery system, use services provided to major clients to "pay" the NBRI in terms of equipment provided and the upgrading of existing technology. Explore the option of sharing expensive technology with other institutions that will reduce the cost of investment and maintenance.

Table 6.4: Technologies and Developments 130

	reliable info				
Advanced techniques					
Description	Significance/impact	**3**	Status	Stake-holders	Strategies
DNA analyses and other specialised techniques for taxonomic studies and genetic diversity determinations	♦ Improved taxonomic descriptors ♦ Better determination of genetic diversity		Still exploring possibilities; technology can/must be better exploited;	NBRI staff; customers;	Establish exchange programs with technological leaders to tap into and to gain access to latest technology and the potential application thereof. Aggressively market the NBRI internationally and make the NBRI attractive for technological leaders to apply the "testing" of their technology in Namibia.
Useful plants					
Description	Significance/impact	**4**	Status	Stake-holders	Strategies
Economic exploration and exploitation of plants	♦ Legal aspects ♦ Possible bio-piracy ♦ Higher workload to determine viable		Still exploring possibilities; Bio-piracy already happening	NBRI-staff; pharmaceutical companies; Namibia (govt and public incl.	Identify plants with economic potential for commercial and communal customers and get these projects funded as soon as possible.

Table 6.4: Technologies and Developments 131

	harvesting quotas • Possible income generation		future generations)	Analyse international methods for dealing with bio-piracy and assess their suitability for the Namibian situation.
Internet				
Description	Significance/impact **4**	Status	Stake-holders	Strategies
Web page development and maintenance	• Better service • Good "advertising" medium • Better/faster distribution of information • High workload impact • If no web page – None of the above; NBRI might become obsolete in policy guidance	Early development phase	NBRI; International community; OPM Information Systems; MAWRD management and IT Committee	Secure international funding for web page development and maintenance. Don not wait for ministerial allocation of money.

Table 6.4: Technologies and Developments 132

Global Climate Change					
Description	Significance/impact	**4**	Status	Stake-holders	Strategies
Impact of global climate change and desertification / land degradation with related environmental concerns	♦ Change in habitat ♦ Change in climate ♦ Thus reduced optimal growing conditions for certain species (possible rare species) ♦ OR: Better growing conditions for neophytes, replacing (desired) original vegetation		Already happening; Impact on Namibian climate unclear; Possible impact underestimated by staff; need for monitoring activities	NBRI staff; farmers; present and future generation of Namibian people; MAWRD management and their advisors e.g. NAPCOD	Explore the possibility of linking up with NAPCOD and other NGO's and/or institutions in developing a sectoral monitoring system.
Agronomic expansion					
Description	Significance/impact	**5**	Status	Stake-holders	Strategies
Impact of Agronomic expansion on natural	♦ Destruction of habitats of possible useful plants		Need for monitoring activities	NBRI staff; farmers; present and future generation of	See above strategy.

Table 6.4: Technologies and Developments 133

habitats / vegetation	♦ Invasion of neophytes			Namibian people; MAWRD management and their advisors e.g. Farmers' unions	
Mining and infrastructure development					
Description	Significance/impact	**4**	Status	Stake-holders	Strategies
Impact of Mining: exploration and new developments on natural habitats / vegetation	♦ New tracks ♦ Large-scale Destruction of habitats ♦ Pollution ♦ Plant poaching		Need for monitoring activities; need for better rehabilitation policies; need for better environmental management; need for public awareness	NBRI staff; Mining companies; DEA / MET; general public; environmental consultants	See above strategy. Linking up with Mines and Energy in advising them on the recommendations made on the rehabilitation plans of mines prior to the start of mining activities.
Tourism					
Description	Significance/impact	**4**	Status	Stake-holders	Strategies
Impact of Tourism	♦ New tracks		Need for	NBRI staff; general	Explore the possibility of linking up with

Table 6.4: Technologies and Developments 134

development on natural habitats / vegetation	♦ Leading to habitat destruction ♦ Plant poaching		monitoring activities; need for better training, including better public awareness	public; Tourism industry, esp. tour guides; MET	NAPCOD and other NGO's and/or institutions in developing a sectoral monitoring system. Explore the possibility of linking with NGO's in developing an awareness program and measuring the effectiveness thereof.
Human population growth					
Description	Significance/impact	**5**	Status	Stake-holders	Strategies
Impact of Population growth on natural habitats / vegetation	♦ Urbanisation ♦ Over-utilisation of natural resources e.g. overgrazing, deforestation ♦ Local extinction ♦ Habitat destruction		Need for monitoring activities; need for public awareness;	NBRI staff; farmers; present and future generation of Namibian people; MAWRD / MET / MRLGH / NPC and their advisors e.g. NAPCOD	Linking with stakeholders in developing a sectoral strategy on making decision makers aware of the impact of population growth on the environment.
Research policy					
Description	Significance/impact	**5**	Status	Stakeholders	Strategies

Table 6.4: Technologies and Developments

Priorities for research lacking or possibly inappropriate (e.g. FSR and E)	♦ More farmer-orientated, often adaptive/applied research, less basic botanical research		Pressure to do FSRE work is mounting	Extension; Planning; NBRI staff; Customers e.g. public, other research institutes	Refocus NBRI to be customer orientated. Proactive in developing criteria based on NDP2, FSRE, rural and commercial customers and determine own priorities in the absence of ministerial priorities.
Agricultural Policy					
Description	Significance/impact	**4**	Status	Stakeholders	Strategies
Lack of involvement and consultation in policy formulation affecting the NBRI	Inappropriate research policies not taking into account abilities and/or functions of NBRI		Who's got a say anyway?	NBRI; MAWRD-management; customers	Develop an excellent relationship with the Deputy Minister and keep him constantly informed about the NBRI achievements, anticipating his information needs and provide it to him with great speed. Once established, influence him to use his power to ensure that you are involved in policy decisions.

Table 7.1: Political Issues

Political Instability and Conflict					
Description	**Importance**	**Impact**	**Status**	**Stakeholders**	**Strategies**
The war situation prevents us from working in the north east; Namibian involvement in the DRC war reduces government funds available	Important crop growing area for germplasm conservation; area of high botanical diversity; area in need of study The diversity may be lost before it is conserved or studied, leading to a loss in options and resources for development.	**5**	New NBRI has no influence on bringing about a change to this situation	NBRI staff Customers SADC project	Identify areas with reduced risk in the north-east and get staff who are willing to take the risk of working there Wait until the area is less risky and accept the loss of plant species Make political leaders aware of the impact and specific the economic impact of losing plant species from which rural customers and the tax payers could benefit from

Table 7.1: Political Issues

Political Decisions					
Description	**Importance**	**Impact**	**Status**	**Stakeholders**	**Strategies**
Politicians are making decisions that adversely affect NBRI activities, due to lack of political awareness and consultation with NBRI e.g. SADC projects, conventions, memoranda, agreements. The importance of botany under-valued by politicians and decision makers.	Increased work load for staff; attention to non-priority projects, leaving less time and resources for priorities.	**6**	Increasing Irregular and un-predictable	Cabinet Top Management other ministries	Develop an aggressive marketing strategy for making senior management and parliamentarians aware of the value of NBRI specific to rural customers.

Table 7.2: Policy and Legislation

Description	Importance	Impact	Status	Stakeholders	Strategies
Absent or inadequate or inappropriate policy or legislation to protect plants; poor enforcement of existing legislation leading to inadequate protection of plants.	Determines what may and may not be done. Results in inadequate management of plant resources and loss of resources and income.	**6**	Increasing trend Change in legislation does not cover changing needs	Law enforcement agencies NBRI staff customers users of resources	Initiate the contracting out of drafting legislation for the protection of plants funded by donors.

Table 7.3: Procedural Issues

Description	Importance	Impact	Status	Stakeholders	Strategies
Time consuming and restrictive procedures and policies for employment and procurement of goods; lowering of minimum entry requirements lead to inadequate and ineffective work force.	Time wasted; frustrated and demoralised staff; job not done effectively; time wasted on training	**6**	Continuous	Personnel office Dir. General services Tertiary education centres HRM in OPM	Identify senior staff member at the procurement component with whom NBRI can directly. Identify and quantify the measurable long-term impact of appointing candidates that did not and/or will not meet minimum appointment requirements (for example on maintaining international standards and respecting agreements and possibly losing future donor money). Recommend only the appointment of staff that meets minimum criteria.

Table 7.4: Economic Issues

Issue	Description	Impact/Importance	Status	Stakeholders	Strategies
Cost Recovery	The general trend is to charge for technical services and there are various possibilities in the NBRI.	Basic services will continue Loss of potential income, motivation will not improve, not in line with standard practice, Product perceived to be less valuable to user (**4**)	No mechanism exists Feasibility being explored	NBRI Customers MAWRD/GRN	Determine unit cost of services provided based on criteria to be developed (such as recovering minimum costs)
Outside funding	Following CBD, funding has increased for plant biodiversity -related activities. However, donor interest is changeable and sustainability of equipment and	Basic services will continue Some projects may not be sustainable Upgrading of IT jeopardized Additional project-funded staff lost New activities cannot be considered	Uncertain	Customers NBRI Donors MAWRD/GRN	Develop criteria for long term sustainability of projects Get approval for applying criteria

Table 7.4: Economic Issues

Issue	Description	Impact/Importance	Status	Stakeholders	Strategies
	staff needs to be addressed	(**3**)			
Financial resources/ Operating funds	Inflation and falling exchange rates will increase financial constraints. These effects will be compounded when coupled with ministerial budget cuts.	Drop in living standards of staff. Possible retrenchments Research activities will be reduced Less funds for basic commodities like stationery (**6**)	Ongoing, Becoming critical	NBRI Customers MAWRD Suppliers	Develop customer focused services of which the output is measurable
Poor salaries	Loss of staff and problems with recruitment become a constraint when salaries remain below market (acceptable)	Tasks not accomplished Unable to expand activities Continue to lose staff Unable to recruit suitable new staff	Ongoing, becoming critical	Customers NBRI GRN	Explore development and growth opportunities Explore opportunity of linking with University to get students to do occasional work for the NBRI Explore the opportunities of giving staff non-financial

Table 7.4: Economic Issues

Issue	Description	Impact/Importance	Status	Stakeholders	Strategies
	levels	members Frustration, low morale (**5**)			rewards such as time-off Explore opportunities requesting donor assisted projects to sponsor outstanding achievers for further studies
Plants with economic potential	Many Namibian plant taxa have economic potential and should be proactively promoted for development.	Lack of income for Namibia Mankind could lose out, e.g. possible cures for diseases NBRI perceived as not contributing to NDP II objectives Value of indigenous plant species remains underestimated Over-utilisation could lead to	Emerging – no access legislation in place but policy currently being drafted	GRN Custodians of resources Mankind Private sector, e.g. pharmacies. Companies	Identify plants with economic potential for commercial and communal customers and get these projects funded as soon as possible

Table 7.4: Economic Issues

Issue	Description	Impact/Importance	Status	Stakeholders	Strategies
		extinction in certain species. (**5**)			
Donor funding					
Description	**Importance**	**Impact**	**Status**	**Stakeholders**	**Strategies**
Should not rely too much on funding from outside, which may be reduced.	Donor funded projects are generally not sustainable. Create a capacity that cannot be maintained. Procuring funding can be time consuming.	**3**	Un-predictable trend	Donors (SABONET MSBP SPGRC BIOTA) NBRI Staff GRN	Identify and quantify the long-term impact of potential projects in terms of sustainability. Only accept projects, which NBRI do have the capacity to support over the long term. If forced to accept unsustainable projects, specify the contractual obligation of the Ministry to fund these projects for their unsustainable life.

Table 7.5: Environmental Issues 144

Description	Importance	Impact	Status	Stakeholders	Strategies
There is an overwhelming amount of material to study and it is important to study and understand natural systems before they become spoilt by development. We may be losing valuable resources before we know anything about them.	Provide baseline information for potential use and/or income generation and conservation. Potential loss of income if resources are not identified or lost.	**2**	Gradually increasing	Mining and Exploration Agriculture Development agencies NBRI staff	Initiate the development of a regional study in SADEC in terms of regional and national system understanding and the impact of development in neighbouring countries with related plant species to gain regional coordination and build a regional influence base in influencing political leaders.

Table 7.6: Climate and Weather

Description	Importance	Impact	Status	Stakeholders	Strategies
Unpredictability makes planning projects and fieldwork difficult. Changing climate may affect vegetation studies.	Climate determines the behaviour of plants. Progress in research may be slow because study is not possible every year.	**4**	Unpredict-able	NBRI staff Customers	Program staff to work on projects during periods when the climate allows fieldwork; and/or contract out work to allow maximum work in areas when the climate allows it, especially for higher priority projects.

Table 10.1: Business Process Action Plan

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
Entry requirements and employment	Establish who changes specifications in adverts, why, and if this is legal	NBRI submissions drafted in required format Familiarity with recruitment charter	GMK Section Heads	08/2001		2002	Done, Link with Personnel Office re. instructions from OPM
	Try to recruit suitable candidates from outside Namibia as potential staff	At least one candidate recruited per year provided staff turnover remains constant	GMK	03/2003	06/2003	Ongoing, until suitably qualified candidates are available locally	Adverts placed for regional recruitment March 2003, no suitable Namibian candidates available after several years

Table 10.1: Business Process Action Plan

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
	Identify training courses outside Namibia	Distance Honours Course on Internet Marketing of Botany course	GMK Section Heads	04/2002		Ongoing	Update inventory
	Assist in UNAM M.Sc. curriculum development	Relevant input provided	GMK Section Heads	06/2001	12/2003	Ongoing	Attempt to assist Biology Department in 06/2002 with teaching but unsuccessful
	Marketing of NBRI	Marketing in the Namibian and NBC	CM – Namibia TS - NBC	005/2003	12/2003	03/2004	Link up with PRO of MAWRD

Table 10.1: Business Process Action Plan

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
Meetings	Evaluate benefits of meetings	Less meetings	All Staff	10/2001	08/2003	12/2003	
	Be selective about attending meetings	More time for production	GMK	10/2001		Ongoing	
	Reallocate responsibilities, delegate, train	Less time on meetings, responsibilities spread amongst all staff	GMK Section Heads	12/2001		Ongoing	
	Convince meeting conveners to be more organised and exercise stricter control	More efficient and effective meetings	All attending	01/2002	03/2003	Ongoing	
Streamline procurement procedures	Compile instruction manuals	Manuals in place and utilised	JlH	07/2003	09/2003	11/2003	Not a duplication of existing procureme nt manuals
	Train staff in procedures	Informed staff	BS, EK	12/2001	03/2002	Ongoing	

Table 10.1: Business Process Action Plan

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
	Select future administrative staff on ability to take over this task	Competent staff appointed	GMK Section Heads	10/2001		04/2002	Done, extremely positive impact
	Re-allocate responsibilities	1 person per section for basic purchases	GMK Section Heads	01/2002	02/2002	Ongoing	
	Create a procurement working group	Reduction in time spent on procurement	SS, TA, SL, JLH, TS	05/2003		12/2003	BS to start –up and provide ongoing guidance
Greater involvement in budget cuts and saved time on procedure	Keep record of expenses	Less under-spending	Section Heads			Ongoing	Database developme nt by BS

Table 10.1: Business Process Action Plan

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
Report Writing	Keep record of activities on daily basis	Less time spent on report writing	All staff	06/2001		Ongoing	Done
	Standard format for all	Less time spent on compiling monthly/quarterly reports	GMK Section Heads			12/2002	Done, provided HO does not change the required format

Table 10.2: Customer Satisfaction Action Plan 151

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
Computerised Identification report	Create format	90% of reports dispatched within 2 days of completion	HK, CM	07/2001	07/2001	07/2001	Completed and implemented
	Train WIND staff to use format		CM	09/2001		10/2001	Done
Streamlining supply of basic information	Create pre-prepared information packages for repetitive requests	5 most commonly requested pre-packages	All	06/2001		12/2001	In place and ongoing
	Establish locality for packages and lists, and inform staff as to procedures		SK	07/2001		09/2001	Done, available in library
	Organise talk to staff on obligations to public and ad hoc requests for information	Increased public awareness	GMK	05/2003	08/2003		Contact OPM On Customer Charter

Table 10.2: Customer Satisfaction Action Plan 152

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
Streamlining of review processes	Establish criteria for circulation and procedure to inform professional staff not involved in circulation	Reviews completed according to established criteria Reports dispatched within one month of arrival	GMK (and professional staff)	07/2001		09/2001	Done
	Implement SABONET Checklist for review of EIA and project proposals		GMK (and professional staff)	03/2004	04/2004	12/2004	
Promote research	Set research priorities and criteria according to objectives of Directorate of Agricultural Research and Training	Research priorities and criteria set, circulated and understood by all research staff	GMK (and professional staff)	02/03	07/03	01/04	Balanced Score Card objectives of NBRI

Table 10.2: Customer Satisfaction Action Plan 153

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
Increase efficiency of collection of requested material	Create central material requests register	Register in place and updated 70% of requests serviced per year	NPGRC (to keep register) All staff (to supply requests with distribution data)	07/2001		Ongoing	
	Develop criteria for supply of material	Criteria in place and applied	All staff	03/2003	12/2003	12/2004	

Table 10.3: Financial Objectives Action Plan 154

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
Budget justification	Undertake sectional planning in advance	Baseline of spending levels and minimum resources levels	Section Heads	07/2002	03/2003	Ongoing	
	Plan for early release of funds	Minimum discrepancies between MAWRD Finances and NBRI records	Section Heads		03/2003	Ongoing	
	Prepare better motivations	Increased influence in budget meetings	All staff			Ongoing	
	Demonstrate outputs to customers		All staff			Ongoing	
	Insist on greater involvement in and feedback from budget meetings		GMK	04/2003	07/2003	12/2003	

Table 10.3: Financial Objectives Action Plan

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
IT/Garden/Lab equipment	Pool funds and prioritise for equipment	List of prioritised equipment for annual purchase	Section Heads	04/2003	11/2003	03/2004	
	Maintain existing equipment	Extend replacement period	All staff			Ongoing	
	Prepare convincing motivations to purchase	Approval solicited from Management	Section Heads		07/2003	02/2004	
	Find other sources for equipment	Equipment needs incorporated into donor project proposals	Section Heads		07/2003	02/2004	
Maintenance	Acquaint responsible staff with procedures	Improved utilization of allocated budget	TS, TA, SL, MU, DL, SB, JLH			12/2003	
Materials and supplies	Prepare good motivations	Funding secured from Management	Section Heads		07/2003	28/02/2004	

Table 10.3: Financial Objectives Action Plan

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
	Find other sources	Funding secured from outside GRN	Section Heads		07/2003	28/02/2004	
	Implement efficient record keeping on needs	Register in place	JLH			Ongoing	
	Ensure efficient use of stock	No misuse of stock	JLH			Ongoing	
NBRI Publications	Prepare good motivations	Funding approved by Management	Section Heads		07/2004	02/2004	
	Showcase good publications	Securing funding as a direct result of prior publications	Section Heads			Ongoing	
	Approach donors for assistance	List of possible donors and their interests	GMK	10/2003	01/2004	2004	

Table 10.3: Financial Objectives Action Plan 157

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
Spending control	Purchase as much as possible using external requisitions if constraints do not allow for internal requisitions	Gap closed between funds available and actually spent	EK, BS, TA, TS, JLH			11/2001	Ongoing currently 60%
	Buy in bulk		JLH			11/2001	Ongoing
	Buy well in advance		JLH, EK, BS, TA, TS, SS			11/2001	Ongoing
	Implement regular follow-up procedures	Improved communication between NBRI, Stores and Finance	JLH, EK, BS, TA, TS			11/2001	Ongoing
Spending procedures	Implement regular follow-up procedures	Less time spent on purchasing process	JLH	04/2003	11/2003	03/2004	

Table 10.3: Financial Objectives Action Plan

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
Subscriptions	Prioritise journals essential for research needs	Prioritise list available and updated	SK			Ongoing	In place
	Implement journal exchange system	Journals exchanged with international organisations	SK			Ongoing	In place
	Identify and approach donors for certain journals	Budget in line within proposals Receipt of publications through donor assistance	Section Heads SK		31/01/2004	Ongoing	In place
	Budget for and order 50% of journals needed	Secured funding for journals	BS, SK		07/2003	02/2004	
Subsistence and Travel	Follow up regularly with S and T office	Improved payment	All staff	01/2003		Ongoing	Keep copies of claims

Table 10.3: Financial Objectives Action Plan 159

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
Budget	Solicit donor funds for travel outside Namibia	Funding secured through appropriate activities in donor project log frames	Section Heads	01/2003	03/2003	10/2003	Biota Phase II, as example
Transport	Explore possibility to get additional vehicle allocated to the NBRI	Suitable and reliable vehicle allocated to the NBRI	TS, GMK			2004	
	Coordinate to combine trips, where possible	Reduced gap between planned and actual expenses	Section Heads	04/2003	12/2003	03/2004	Productivity may be compromised
	Plan to compensate for km tariff hike due to fuel increases	Responsiveness to fuel increases	All staff		07/2003	02/2004	May not be necessary

Table 10.4: Learning And Growth Action Plan 160

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
Business competencies needed	Arrange and implement training in database management	At least two technicians trained and able to manage database, one spending 75% of time and one spending 25% of time on database management	Section Heads	06/2003		12/2003	
	Arrange and implement training in taxonomy	5 staff in WIND Revise two genera for updated Flora	Section Head (CM)	06/2003	09/2003	12/2003	Availability of competent mentor
	Arrange and implement training in sustainable plant use	Final Draft for Local Livelihoods Program	Section Head and GMK	03/2003	06/2003	31/12/2002	Availability of competent trainer/mentor Appointment of SAR

Table 10.4: Learning And Growth Action Plan 161

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
Individual training needs	Execute a training needs assessment by revisiting REMP analysis	Comprehensive and updated list of training needs at all levels	GMK	08/2003		12/2003	
Impact of training on production	Adjust work plan	Lowered projected outputs Reallocation of work	Section Heads	01/2003	06/2003	12/2003	
Induction strategies	Maintain status quo	Staff mainstreamed in GRN System – 1 month and Section procedures – 3 months		06/2003	12/2003	Ongoing	Currently adequate
Retention strategies	Encouraging and facilitating further studies in work-related fields	Minimum staff turn-over	Section Heads			Ongoing	
Options	Explore possibilities	Minimum staff turn-	Section heads			Ongoing	

Table 10.4: Learning And Growth Action Plan

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
available as non-financial rewards to motivate staff	on a case-by-case basis, e.g. attend congresses, training, projects	over					
Delegation of responsibilities to empower staff	Maintain status quo on maintenance of building	Well maintained building and staff empowered	Section Heads			Ongoing	
	Rotate staff acting in management positions	Staff empowered	Section Heads			Ongoing	
	Nominate staff to fora outside the NBRI	Staff exposed and empowered	Section Heads	01/2003	12/2003	12/2004	
Community involvement	Increase BotSoc membership	Present two lectures/year	Section Heads	01/2003	06/2003	12/2003	

Table 10.4: Learning And Growth Action Plan 163

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
and social awareness	Appoint Environmental Education officer	Develop a Concept Note for the appointment of an associate specializing in EE	GMK			12/2004	
	Open Botanic Garden on weekends	Approval from GRN to open gardens over weekends	GMK			12/2004	
		Recruit volunteers and/or staff to do garden duty on weekends	SB			12/2004	
		Proposal to construct toilets and other facilities for visitors	SB			12/2004	EU Tourism project
	Write an article for scientific society on a common group	1 article per year	CM/WIND	03/2003		12/2003	

Table 10.4: Learning And Growth Action Plan 164

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
	Organise open day for Botanical Garden	100 people to attend	BotSoc SB	03/2003		06/2003	Media coverage
Mechanisms for individual conflict resolution	Outsource to independent specialists as a last resort	Resolving of cases of conflict	GMK			Ongoing	
	Training of managers in basic conflict resolution skills	One staff member trained in basics of conflict resolution to solve minor conflict situations	GMK	06/2003		12/2003	Funds permitting
Contingency planning	Develop understudies, where possible	Training of at least two staff members in all business areas, where possible	Section Heads	01/2003	06/2003	12/2003	

Table 10.4: Learning And Growth Action Plan

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
Team development	Experiment with a variety of team building opportunities that will improve team spirit, understanding and improve cohesion	Section Heads exposed to a work-related weekend with the objective of gaining an improved understanding of each other's work	GMK	07/2003	10/2003	12/2003	Funds permitting
		Monthly Objective Sheets in place	Section Heads			Ongoing	In place and exceptionally beneficial
		Biannual business planning review facilitated by independent business planning consultant	GMK		08/2003	Ongoing	
		Corporate clothing	JLH	08/2003	05/2003	12/2003	

Table 10.4: Learning And Growth Action Plan 166

Issue	Strategy	Performance Indicator	Responsibility	Starting Date	Progress Date	End Date	Comments
Impact of technological changes on proposed training	Develop Information Management and Biotechnology Strategies	Training opportunities developed for genetic markers	GMK	02/2003		04/2003	Training Workshop arranged through UNAM
		Training opportunities developed for GIS	BS	01/2003		12/2004	