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USAID EAST AFRICA TRADE AND INVESTMENT HUB

LABORATORY TRAINING MANUAL IN BUSINESS PLANNING

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USAID EAST AFRICA TRADE AND INVESTMENT HUB

LABORATORY TRAINING MANUAL IN BUSINESS PLANNING

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DISCLAIMER

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ACRONYMS AND ABBREVIATIONS

AGOA	:	African Growth and Opportunity Act
B2C	:	Business to Customer
CA	:	Cooperation Agreement
CSF	:	Critical Success Factor
EAC	:	East African Community
EATIH	:	East Africa Trade and Investment Hub
EU	:	European Union
FAO	:	Food and Agriculture Organization
GHP	:	Good Handling practices
GLP	:	Good Laboratory Practices
IPPC	:	International Plant Protection Convention
KPI	:	Key Performance Indicator
KRA	:	Key Result Area
OIE	:	International Organization for Animal Health
PIMS	:	Program Information Management System
PRA	:	Pest Risk Analysis
PS	:	Partner States
SPS	:	Sanitary and Phytosanitary
TBT	:	Technical Barriers to Trade
TF	:	Trade Facilitation
TIFA	:	Trade and Investment Framework Agreement
UAE	:	United Arab Emirates
USA	:	United States of America
WTO	:	World Trade Organization

EXECUTIVE SUMMARY

The East Africa Trade and Investment Hub (EATIH) is the U.S. Government's flagship project under the Preferential Trade Africa initiative, launched in 2013 to boost trade and investment with and within Africa. The Hub partners with East African and U.S. businesses to attract investment needed to transform the East African private sector into vibrant global trading partners. Improving the region's trade competitiveness, encouraging the diversification of exports beyond natural resources, and promoting broader, more-inclusive economic growth will lead to more food secure and resilient East African communities. In summary, the goals of the Hub are to deepen regional integration; increase competitiveness of selected regional agricultural value chains; promote two-way trade with the U.S. under the African Growth and Opportunity Act (AGOA); and facilitate investment and technology to drive trade growth intra-regionally and to global markets.

The specific areas of assistance by the Hub in the field of SPS include:

- supporting the EAC Partner States in the ratification of EAC SPS Protocol;
- providing legal assistance to the EAC Secretariat for drafting the bill and regulations to operationalize EAC SPS Protocol;
- raising awareness on the SPS protocol at the country level;
- supporting e- learning around Pest Risk Analysis;
- supporting adoption of Program Information Management System (PIMS) at regional level and sensitization at country;
- developing regional framework to operationalize the PRAs for rice, beans and maize, etc;
- enhancing Sanitary and Phytosanitary (SPS) capacity in the EAC Region including development of Laboratory business plans.

The United States of America (USA) government has supported several agriculture-based initiatives in the East African region. These initiatives include the Aflatoxin Project that had several components such as human capacity development support, expansion of intra-regional trade through establishment of harmonized regional food and feed standards, and development of regional bio-control products for Aflatoxin prevention. Another initiative is the support towards improved SPS laboratory decision-making within the East African Community (EAC) being implemented under the EATIH.

The current task is primarily meant to enhance capacity of EAC member states SPS laboratory infrastructure through development of a laboratory manual for business planning. The development process of the Manual closely followed the generally accepted business planning principles and the ultimate goal of the SPS laboratory training program. The sessions covered in this manual included an overview of Laboratory Business Planning, Structure of a Business Plan and Laboratory Profile, Internal Analysis of an Institution's Capacity, Market Analysis, External Environment (PESTEL) Analysis, SWOT and Stakeholder Analysis, Critical Success Factors, Strategic Framework, Operations Plan, Marketing Plan, Human Resources Plan, Financial Plan, Costing, Pricing and Break-Even Analysis, Risk and Risk Management, Implementation (Action Plan) Matrix, and Monitoring and Evaluation.

The selection criteria of SPS laboratories and trainees to participate in business planning training were developed concurrently with the Business Plan Training Manual. The trainees targeted for laboratory business planning included Laboratory Directors, Laboratory managers, Quality managers, and Technical laboratory staff. The training is expected to take a comprehensive look into business plan development for laboratories whereby the participants shall learn how to formulate business plans for their laboratories by the end of the training. In other words, the participants will be expected to acquire knowledge and skills that will enable them to identify the steps in the business plan development process; describe business plan formulation process; and to analyze the types of information required in developing a business plan.

I. PREAMBLE

I.1 Background

Trade of agricultural products has continued to expand, driven by high demand, particularly in emerging economies. The value of global agricultural exports nearly tripled between 2000 and 2012, while agricultural exports increased by about 60 percent in volume over the same period. With global demand for agricultural products expected to remain firm in future decades, this growth is forecast to continue. The interplay of supply and demand factors will continue to affect the evolution of production, consumption and, as a result, net trade. It is projected that the increasing divergence in trends in net trade in agricultural products will widen further in the period to 2024 (FAO, 2015).

International trade in agriculture is guided by the World Trade Organization (WTO) Agreement on the application of Sanitary and Phytosanitary (SPS) measures. The WTO Agreement encourages members to enter into consultations with other nations and regional trade blocks for the purposes of achieving bilateral and multilateral agreements on recognition of the equivalence of specified SPS measures for trade facilitation.

The Agreement on the application of Sanitary Measures (WTO-SPS Agreement) allows WTO member states the right to take SPS measures necessary for the protection of human, animal and plant life or health in their territories while minimizing trade barriers. The Agreement and international standards set by the three standard setting bodies, i.e., Codex Alimentarius, International Plant Protection Convention (IPPC) and the International Organization for Animal Health (OIE), provide guidelines for use by countries in monitoring pests, diseases and food contaminants to secure human, animal and plant health/life and facilitation of safe trade. The WTO-SPS Agreement and international standards are the basis on which bilateral and regional agreements on agricultural trade are undertaken to minimise plant health, animal health and food safety concerns.

I.2 The East African Community–United States Trade Cooperation

The East African Community (EAC) is one of the leading regional economic blocks in sub-Saharan Africa. It has made great strides towards integrating the economies of its Partner States (PS). The block has established a **customs union** and is working towards a common market. Apart from trading among themselves the EAC partners are involved in global agricultural trade. The principal trading partners of the EAC include the United States (US) and the European Union (EU).

On July 16, 2008, the US and the EAC signed a US-EAC Trade and Investment Framework Agreement (TIFA) in Washington, DC. Trade Ministers and other senior officials from the five EAC member states (Burundi, Kenya, Rwanda, Tanzania, and Uganda) witnessed the signing. The purpose of the TIFA was to strengthen the US-EAC trade and investment relationship, expand and diversify bilateral trade, and improve climate for business between U.S. and the East African firms.

To further strengthen agricultural trade between EAC and the US Government a Cooperation Agreement (CA) on Sanitary and Phytosanitary (SPS) measures, Technical Barriers to Trade (TBT) and Trade Facilitation (TF) was signed in February 2015. Article 2.1 of EAC-US Cooperation Agreement outlines areas of cooperation to be addressed under SPS measures. Among them is **a recommendation to build the capacity** of EAC Partner States in SPS measures through targeted technical assistance in line with Article 9 of the SPS Agreement.

Though there is trade imbalance in favour of the US, the EAC countries' exports to the US have been growing in the recent past due to initiatives such as AGOA. For instance, EAC countries exported to the US goods valued at \$788 million in 2015 which was an increase of 2.7% from 2014. These values of exports consisted of Kenya (\$565 million), Tanzania (\$105 million), Uganda (\$64 million), Rwanda (\$46 million), and Burundi (\$8 million). The five largest categories of exports in 2015 were Woven Apparel (\$201 million), Knit Apparel (\$195 million), Spices, Coffee, and Tea (mostly coffee) (\$139 million), Edible Fruit and Nuts (macadamia nuts) (\$50 million). The value of agricultural exports constituted 29.5% of the total exports which is significant considering the contribution of agricultural sector to the economies of the partner states.

1.3 Technical Assistance in Sanitary and Phytosanitary

The US government has supported several agriculture-based initiatives in the East African region. These include the Aflatoxin Project that had several components such as human capacity development support, expansion of intra-regional trade through establishment of harmonized regional food and feed standards, and development of regional bio-control products for Aflatoxin prevention. **Another initiative is the support towards improved SPS laboratory decision-making within the EAC being implemented under the EATIH.**

The Hub is the U.S. government's flagship project under the Preferential Trade Africa initiative, launched in 2013 to boost trade and investment with and within Africa. The Hub partners with East African and U.S. businesses to attract investment needed to transform the East African private sector into vibrant global trading partners. Improving the region's trade competitiveness, encouraging the diversification of exports beyond natural resources, and promoting broader, more-inclusive economic growth will lead to more food secure and resilient East African communities. In summary, the goals of the Hub are to deepen regional integration; increase the competitiveness of selected regional agricultural value chains; promote two-way trade with the U.S. under the African Growth and Opportunity Act (AGOA); and facilitate investment and technology to drive trade growth intra-regionally and to global markets.

The specific areas of assistance by the Hub in the field of SPS include:

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- supporting adoption of PIMS at regional level and sensitization at country level;
- developing regional framework to operationalize the PRAs for rice, beans and maize, etc;
- enhancing Sanitary and Phytosanitary (SPS) capacity in the EAC Region including development of Laboratory business plans.

Although Hub has been addressing capacity building in other areas as indicated here above, the current assignment is meant to enhance capacity building in EAC Member states SPS Laboratory management through development of a laboratory manual for business planning. This manual is expected to provide hands on training on business planning for managers and operators of laboratories for the purpose of improving service delivery to customers. This manual can also be used in the development of business plans by government, regulatory and private sector laboratories.

I.3.1 Target Groups for Developing Laboratory Business Plans

- Laboratory Directors
- Laboratory managers
- Quality managers
- Technical laboratory staff

I.3.2 Selection Criteria of Participants

In order to ensure success of the training workshop, the following two sets of selection criteria shall be employed:

- i) Selection of participating SPS laboratories (**Annex A**).
- ii) Selection of participants in laboratory business planning workshop (**Annex B**).

2. TRAINING OBJECTIVES

This training will take a comprehensive look into business plan development for laboratories. The participants will learn how to develop the business plans for their respective laboratories.

At the end of the training, the participants will be able to:

- Identify the steps in the business plan development process;
- Identify and describe business plan development process;
- Describe the types of information required in developing a business plan;
- Learn by developing “mock” business plans; and
- Develop or (review as appropriate) business plans for their laboratories

3. TRAINING METHODOLOGY

The workshop will be conducted using a combination of interactive lecture style, Power Point presentations, and group exercises using application exercises and role playing. An evaluation form will be provided to the participants at the end of the program to rate the training content, training material, facilitators and overall level of the program.

4. TRAINING MATERIALS/RESOURCES

Materials needed for the duration of the training include but are not limited to:

- i) Power point presentations (Handouts)
- ii) Sample documents (Handouts)
- iii) Training Compact Discs (CDs)/Flash Drive

5. TRAINING CONTENTS

The training on laboratory business plan development will consist of the following sessions:

MODULE I: OVERVIEW OF LABORATORY BUSINESS PLANNING PROCESS

I.1 Learning Objectives

By the end of this session, the participants should be able to:



- Define Strategic Planning
- Describe steps in Strategic Planning
- Define Business Planning
- Describe reasons for business planning

I.2 Session Content

Definition of Terms:

- Strategic Planning is the process of formulating an institution's:
 - ✓ vision
 - ✓ mission
 - ✓ guiding principles (core values)
 - ✓ objectives
 - ✓ strategies
 - ✓ action plans and
 - ✓ allocating necessary resources for implementing the plan.
 - ✓ Strategic Planning provides foundation for business planning.
- Business Planning is the process of determining a commercial enterprise's:
 - ✓ objectives
 - ✓ strategies
 - ✓ projected actions in order to promote its survival
 - ✓ development within a given time frame.
- Business planning typically has two key aspects:
 - ✓ focus on making profits; and
 - ✓ focus on dealing with risks that might negatively impact the business.

- A business plan is a written description of your lab's future; a document that tells what you plan to do and how you plan to do it.

□ **Key Planning Questions**

- Where are we now?
- Where do we want to be?
- How do we get there?
- How will we know when we have arrived?

□ **Strategic/Business Planning Process**

Step 1: Information Gathering and Analysis

I A. External Environment, i.e., Political, Economic, Socio-cultural, Technological, Ecological and Legal (PESTEL) Analysis

I B. Market (Customer) Analysis

I C. Internal Environment Analysis (Self Appraisal)

Step 2: Identification of Critical Success Factors (CSFs) facing the Laboratory

- CSFs, also known as Key Results Areas (KRAs), are the essential areas of activity that must be performed well if you are to achieve the mission, goals or objectives for your Lab.

Step 3: Development/Review of the Laboratory's Vision and Value Statements

- A vision is an inspiring view of the preferred future.
- A vision answers the question “what will success look like?” It is the pursuit of this image of success that motivates people to work together.
- Values are principles or beliefs that guide a Laboratory's members as they pursue the Lab's purpose.

Step 4: Development/Review of the Laboratory's Mission Statement

- A mission typically describes a Laboratory in terms of:
 - ✓ Why the Laboratory exists, and what it seeks to accomplish.
 - ✓ The main method or activity through which the Lab tries to fulfill its purpose.

- A mission statement answers three questions:
 - ✓ Why does the Laboratory exist?
 - ✓ What business are we in?
 - ✓ What business should we be in?

Step 5: Development/Review of the Laboratory’s Strategic Goals/Objectives

- A goal is an open ended statement of what one wants to accomplish with no quantification of what is to be achieved and no criteria for completion.
- An objective, on the other hand, states what is to be accomplished and by when.
- Objectives are long range results needed to carry out the Laboratory’s mission.
- Objectives represent the answer to the question “where do we want to go?”

Step 6: Formulation of Strategies for each Goal

- Strategies are major courses of action that a Laboratory takes to achieve its goals.
- Strategy is a comprehensive guideline or master plan of a Laboratory.
- Strategies describe how objectives will be achieved.

Step 7: Establishing/Setting of:

- Annual Objectives (Action Plan) Matrix
- Resource Mobilization Avenues
- Monitoring and Evaluation Mechanisms

□ Reasons for developing a Business Plan

- I. Getting an integrated view of your business which:
 - ✓ helps you to identify and better your target clients
 - ✓ outline your market segment
 - ✓ shape your pricing strategy
 - ✓ define the competitive conditions under which you must operate in order to succeed

2. Reaching Mutual understanding within the Management Team
3. Determining financial needs
 - Determining the amount, type and sources of financing and when it is required.
 - Using the business plan in the process of application for funds.
4. Basis for Approval from board of directors/shareholders
5. Using the business plan in recruiting and introducing new members of the management and staff.
6. Deriving objectives for employees
7. Informing/motivating employees about the objectives of the company.
8. Informing Lenders
9. Informing Partners

□ **The case for a Laboratory Business Plan**

- A Laboratory should be viewed as a business – profit might be the aim but not always and perhaps not for all services
- Covering the cost should be the minimum aim
- Must be run in a systematic, continuous and business-like manner
- All laboratories need to generate new business and provide high quality service
- Plan objectives must be SMART which stands for:
 - ✓ Specific
 - ✓ Measurable
 - ✓ Attainable
 - ✓ Relevant
 - ✓ Timely
- Review the plan continually because operating conditions change.
- Use this process as a management tool to review future plans

I.3 Summary



In this session we have defined the concept of strategic and business planning. We have also discussed the strategic planning framework and highlighted some of the important reasons for business planning.

I.4 Activity and Self- Assessment Questions (Annex I: Worksheet I)

MODULE 2: STRUCTURE OF A LABORATORY BUSINESS PLAN

2.1 Structure of a Business Plan

2.1.1 Learning Objectives

By the end of this session, the participants should be able to:



- Define and explain all elements of a business plan
- Develop a logical business plan structure

2.1.2 Session Content

After you have considered the purpose of your business plan and have done the necessary background preparation, it is time to consider the actual elements that you will include in the written document. This should contain five types of information as follows:

- The mission of your business and objectives you want to achieve;
- Your targeted markets and clients, the products and/or services you will provide and the position of your competitors;
- The qualitative and quantitative results you expect to achieve;
- The human resources, infrastructure, equipment, raw material and financial resources you need in order to achieve your goal in business;
- The technical, organizational and administrative processes you will apply.

2.1.3 Summary



The business plan structure includes all the elements you require to store the information you need to operate your business successfully.

2.1.4 Activity and Self- Assessment Questions (Annex 2: Worksheet 2)

2.2 Laboratory Profile

2.2.1 Learning Objectives

By the end of this session, the participants should be able to:



- Describe the laboratory's business model
- Describe the services offered by the Laboratory
- Describe the Laboratory's operations

2.2.2 Session Content

This module describes the services to be offered by the laboratory. By briefly describing the business model of the laboratory, it serves as an introduction to the business plan.

The business model is a description of how the laboratory operates; how services are provided; how they are financed; who the customers are; and what revenues are achieved. For a business plan both the current situation (in the case of an existing laboratory) and the future situation need to be taken into account. The focus is on how the laboratory delivers services and earns revenue, which includes the following areas:

- **Services: *what services and analyses are offered;***
- **Volume of business and turn-over: *how many samples per year?, prices, income (revenue), etc.;***
- **How do you sell/market your services: *how do you reach your customers and stakeholders; who orders analyses and who pays? How do you differ from your competitors;***
- **How do you operate: *getting the samples, deliver results, getting payment***

Business Plan Sections

I. Cover page

- Should include:
 - ✓ Institute/Lab name and logo,
 - ✓ Date and month issued.
- Be innovative, make it special but simple
- The other side of the cover page could contain, Address, Telephone numbers, e-mail and web address

2. Table of Contents

3. Executive summary (must do last)

- Should not exceed about 2 pages and should contain the following:
 - ✓ A description of the lab including your services
 - ✓ Your Mission statement
 - ✓ Management of the laboratory
 - ✓ The market and your customers
 - ✓ Your competition
 - ✓ Your business operations
 - ✓ Your financial projections and plans

Vision Statement: The Vision statement is for you and your staff. It is not for your customer

Mission Statement: Your Mission statement should reflect your laboratory's special role. The activities/purposes of your laboratory.

Core Values: Does your laboratory have values that guide laboratory staff as they pursue the organization's purpose? List them.

Quality statement: Develop one if it does not exist

Goals: Are qualitative, they are broad, general and abstract

Objectives: Objectives are narrow precise, tangible, concrete and can be validated

Critical Success Factors

- Key elements which if put in place will assure success of the business e.g.
 - ✓ Test Methods availability,
 - ✓ short turn-around time,
 - ✓ maintaining ISO 17025 accreditation status

The laboratory profile describes the laboratory in terms of

- The name of the laboratory
- The location(s) and contact(s) of the laboratory
- Year established
- The placement of the laboratory (independent entity, part of institution).
- Why established
- Description of services offered by the laboratory
- Major objectives

- Hours of operation
- Number of employees
- The organisational structure of the laboratory

Illustration of a laboratory profile:

Laboratory name:.....

Year established:

Physical Location.....

Postal Address.....

Telephone contact(s).....

Email address.....

Social media address.....

Organisational structure:

Name of lab personnel	Roles
.....
.....
.....

Description of services offered by the laboratory

.....

SWOT Analysis

Analyse your:

- Strengths and Weaknesses as part of internal analysis
- Opportunities and Threats as part of external analysis

PESTEL Analysis

Analyse the following factors that will influence your business (external analysis)

- Political
- Economic,

- Social,
- Technological,
- Environmental and
- Legal

□ **Marketing Plan**

Market analysis - Customers

- What are your customer categories?
- Government, exporters, domestic industry
- What are their major needs?
- Consider emerging opportunities

Market analysis - Competitors

- Make a list of Laboratories offering the same line of service
- Assess their strengths and weaknesses
- What do they do better than you
- Consider all their weaknesses and count them as your strengths
- Consider customer potential & customer movement
- Your competitive edge!

Costing, Pricing and Breakeven Analysis: Is your costing ad-hoc or do you have a system in place?

Definitions: Costing - In accounting terms, costing refers to a system of calculating the amount of money it takes to produce goods/services or operate a business. Generally, costs include variables like cost of labor, cost of materials, cost of distribution and selling, taxes and administrative costs.

Pricing - is the process whereby a business sets the price at which it will sell its products and services, and may be part of the business's marketing plan. In setting prices, the business will take into account the price at which it could acquire the goods, the production cost, the market place, competition, market condition, and quality of product.

Breakeven analysis - Break-even analysis is a technique for analyzing how revenue, expenses and profit vary with changes in sales volume. It involves analyzing different price levels relating to various levels of demand, a business uses break-even analysis to determine what level of sales are needed to cover total fixed costs.

Promotion: Develop a promotion strategy and analyse tools to be employed

Human Resource Plan

- Do your laboratory employees have Job descriptions?
- Do you have any employee motivational schemes?
- Does your laboratory implement incentive schemes (Special reward to staff based on performance such as a Performance based Incentive scheme)

Financial Plan

To include:

- Projected monthly revenue and expenditure
- Profit and loss projections
- Financing
- Viability analysis
- Risks
- Contingency plan

Plan Implementation Matrix

Activity	Responsible staff member	Time (weeks)	Beginning date	Completion date
Plan finalization				
Plan approval				
Costing and pricing of services				
Marketing activities (can be broken up into several activities)				
Employee Job descriptions				
Development of staff motivation schemes				
Review of Business plan				

Monitoring and Evaluation Plan

- focus on the key evaluation questions and the evaluation audience
- capture all that you need to know in order to make a meaningful evaluation report of the project
- be guided by relevant monitoring questions to avoid collection of unnecessary data

- use relevant data analysis techniques and appropriate presentation for reporting the results
- operate with the budget and other resources allocated to the implementation of the plan
- identify the skills required to collect and analyze data

2.2.3 Summary



- A laboratory business profile serves as an introduction to the business plan.
- It defines the name of the laboratory, ownership, location, contacts, year of establishment, types of services offered, staffing and organization structure

2.2.4 Activity and Self-Assessment Questions (Annex 3: Worksheet 3)

MODULE 3: INTERNAL ENVIRONMENT ANALYSIS

3.1 Learning Objectives

By the end of this session, the participants should be able to:



- Identify and evaluate the laboratory's specific characteristics, including its resources, capabilities, and core competencies.
- Identify and prioritize the laboratory's strengths and weaknesses.

3.2 Session Content

- The **internal analysis** serves to establish the institutional capacity of a laboratory.
- It will define a clear map of the organization of a laboratory, and its human and logistics capabilities.
- This analysis can be done by reviewing documentation.
- However, where possible these findings need to be validated by an on-site visit.
- The data generated by an internal analysis is important because you can use it to develop business planning objectives to sustain and grow your laboratory.
- The purpose of this step is to assess internal structure, process and operations of your laboratory.

Strengths and Competencies

- An important assessment in an **internal analysis is to determine your Lab's level of strength and competency.**
- A strong Laboratory uses updated **technology** systems and equipment to accomplish its work.
- Its **financial goals** are being met and strategic planning objectives are being accomplished.
- A Lab with strong **competency** also has a solid **brand identity** built upon expertise, capabilities and resources within the organization.

□ **Laboratory Weaknesses/Constraints**

- A well designed internal analysis should uncover any weaknesses that exist.
- Once your analysis has revealed your constraints, you can revise your business plan to address and overcome unattained objectives and improve or eliminate weaknesses.

□ **Areas to be examined during an internal analysis include:**

- ✓ Laboratory staff (Human Capital)
- ✓ Quality Management Systems (QMS)
- ✓ Buildings, physical facilities and equipment
- ✓ Use of technology (ICT)
- ✓ Financial position
- ✓ Governance and Management of the Laboratory
- ✓ Programs and Projects etc.

□ The outputs of internal analysis of a laboratory are its Strengths (S) and Weaknesses (W).

3.3 Summary

- The purpose of internal analysis is to identify the **organizational assets, resources, skills and processes** that represent either **strengths** or **weaknesses**.
- **Strengths** are aspects of the Laboratory's operations that represent competitive advantages i.e. **activities the laboratory does well or resources it controls**.
- **Weaknesses** are activities that the laboratory **does not do well or resources that it lacks**.

3.4 Activity and Self- Assessment Questions (Annex 4: Worksheet 4)

MODULE 4: MARKET ANALYSIS

4.1 Learning Objectives

By the end of this session, the participants should be able to:



- Carry out customer analysis
- Conduct competitor analysis

4.2 Session Content

- This analysis consists of two major categories of factors namely:
- Market/Customer group analysis in terms of:
 - ✓ size
 - ✓ growth
 - ✓ seasonality
 - ✓ marketing mix
 - ✓ profits, and
 - ✓ financial ratios
- Competitor analysis in terms of:
 - ✓ concentration
 - ✓ power of buyers
 - ✓ power of suppliers
 - ✓ rivalry among existing Labs
 - ✓ pressure from substitute services
 - ✓ Level of capacity utilization
 - ✓ entries and exits of market players

Customer Analysis

- The first commandment of marketing is: **“Know thy Customers”**.
- The **customer analysis** should be carried out by describing:

- ✓ who the **current and potential customers** are in terms of their demographic and socioeconomic characteristics;
 - ✓ what they buy;
 - ✓ where they buy ;
 - ✓ when they buy;
 - ✓ why they prefer a particular product (customer value); and
 - ✓ their responsiveness to various tools of marketing effort (Ps of Marketing)
- The key questions to be answered in this analysis are:
 - ✓ Who are your laboratory's customers?
 - ✓ What do they buy?
 - ✓ How do they choose?
 - ✓ Why do they select a particular product/service?
 - ✓ Where do they buy it?
 - ✓ When do they buy it?
 - Some of these questions are answered by conducting analysis of:
 - ✓ market area performance versus the laboratory average;
 - ✓ trends of sales, costs, and profits by products;
 - ✓ performance of distributors, end-users and key customers; and
 - ✓ past versus current results by area, product, channel and so on.

□ **Competitor Analysis**

- The competitor analysis answers the following questions:
 - ✓ Who are the laboratory's principal competitors?
 - ✓ How do they compare with your laboratory in size?
 - ✓ Where are they located?
 - ✓ Do they operate in the same market sectors as you do?
- The above questions are normally answered through collection and analysis of both primary and secondary data.

□ **How to carry out a market analysis**

1. Demographics and Segmentation

- size of market ; local, national, regional or international
- customer categories e.g. Government, Exporters, domestic industry, NGO's, individuals and institutions etc

2. Target Market

- Define your target customers, (high end or low end customers).
- Look at different drivers of demand
- Identify which segment brings you the largest volume of work

3. Market needs

- Show your potential investor that you have an intimate knowledge of your market. You know why they buy!
- List down the major needs of your customers
- Emerging Opportunities; Are there any emerging opportunities?

4. Competition

- Give a fair view of your competitors,
- What do they do better than you?
- Analyze their strategy in the market in order to find a weakness that your laboratory will exploit for its own market positioning.
- Do you have a competitive edge?
- Turnaround time - convenience.
- Assessment can be done through customer surveys

5. Barriers to entry

- Factors that prevent a startup from entering a particular market:
 - ✓ Capital requirements for infrastructure,
 - ✓ Equipment
 - ✓ R&D, advertisement e.t.c.

- ✓ customer loyalty to incumbents,
 - ✓ accreditation status
- Government policy can limit or prevent entry to industries with various controls.
 - Start-ups in highly regulated industries will find that incumbents have fine-tuned their business according to regulation.
 - What makes you think you will be successful in trying to enter this market? (start-up only)

6. Regulation:

- You need to know the main regulations applicable to your business and which steps you are going to take to remain compliant.
- When regulation is restrictive you need to find out the channels/procedure to use for its review.

4.3 Summary

- The market analysis identifies:
 - ✓ Key markets and constituents
 - ✓ Needs, perceptions, and service expectations of each market
 - ✓ The emerging market trends
 - ✓ The implications for the Laboratory and how it should respond to these changes and trends



4.4 Activity and Self-Assessment Questions (Annex 5: Worksheet 5)

MODULE 5: EXTERNAL ENVIRONMENT ANALYSIS

5.1 Learning Objectives

By the end of this session, the participants should be able to:



- i) Define external environment analysis;
- ii) Understand the role of external environment analysis in business planning;
- iii) Use a range of tools to analyze an organization's external environment and explain the limitations of these analytical tools and the role of more subjective analytical approaches;
- iv) Undertake the identification and evaluation of external variables (political, economic, social-cultural, technological, ecological and legal (PESTEL)) that affect business (laboratory); and
- v) Identify the laboratory's opportunities and threats (challenges).

5.2 Session Content

Definition of external environment analysis

The analysis of the external environment evaluates the business environment in which the laboratory operates. A PESTEL analysis is a method of assessing the business environment.

The process of carrying out PESTEL analysis should involve as many managers as possible to get the best results. It includes the following steps:

- Information Gathering about political, economic, social technological, ecological and legal trends and changes plus any other factor(s).
- Identification of the PESTEL factors which represent key opportunities and threats.

The PESTEL analysis process includes:

- i) brainstorming and listing key issues that are outside the organization's control
- ii) broadly identifying the implications of each issue
- iii) Rating its relative importance to the organization (e.g. critical, extensive, important, significant, moderate, or insignificant)

- iv) Rating the likelihood of it occurring (e.g. certainty, extremely likely, likely, potential, remote possibility, or will not transpire)
- v) Briefly considering the implications if the issue did occur

When **analyzing the external environment** Michael Porter's five forces may be a useful tool. The Five forces to be considered in the laboratory environment can be illustrated by the following:

- i) **Competition:** Within the existing business that is other laboratories that can supply the same analyses and are within the transport range of samples. How is the competition on price, speed, volume, added services etc.?
- ii) **Supplier:** Covers two different effects: the power of suppliers to deliver material and equipment at a competitive price and access to competent staff with the right skills and with a reasonable wage demand.
- iii) **Substitutes:** Can your offering (i.e. analysis) be made obsolete? For instance introduction of new technology like classical microbial analyses are being replaced by molecular methods or new analytical methods and equipment emerging so often.
- iv) **Buyer:** If there is more than one customer they may form an alliance to put pressure on price, which can have a strong effect. In addition, a single big customer may be so important that he can ask for an unreasonable discount.
- v) **New players:** New laboratories that may enter the market, maybe with new technology or perhaps a customer will establish own laboratories.

5.3 Summary

- General or macro-environment includes external factors that usually affect all or most Laboratories.
- These factors include **political, economic, social, technological, ecological and legal** (PESTEL) forces.
- The outputs of external environment analysis are the **Opportunities (O) and Threats (T)** facing the Laboratory.

5.4 Activity and Self- Assessment Questions (Annex 6: Worksheet 6)

MODULE 6: SWOT AND STAKEHOLDER ANALYSIS

6.1 Learning Objectives

By the end of this session, the participants should be able to:



- Prioritize the laboratory's strengths
- Prioritize the weaknesses
- Prioritize opportunities
- Prioritize threats (challenges)
- Prioritize key stakeholders

6.2 Session Content

SWOT Analysis

- A **Strengths Weaknesses Opportunities and Threats (SWOT)** analysis is a planning tool that provides an overall view of the most important factors influencing the future of the laboratory.
- It is the foundation for a **reflective self-assessment** of how your laboratory is performing its mission.
- The analysis looks at the **internal and external environment** impacting on your laboratory.
- The SWOT analysis results form the basis for developing recommendations and **action plans**.
- These recommendations and action plans take into consideration many different **internal** and **external** factors that:
 - ✓ **maximize the positive potential** of the laboratory's **strengths** and **opportunities**
 - ✓ **minimize the negative impact** of its **weaknesses** and **threats**.
- A SWOT may be developed by examining and answering the following questions:
 - ✓ **Vision and strategy** – do the vision and strategy fit with the resources and capability available?

- ✓ Are the necessary resources (financial, human, infrastructure and supplies) available to start or continue operation?
- ✓ Have goals been set and is the performance being measured – is the laboratory operating under a set of performance measures; who is defining the Key Performance Indicator and who does the follow-up?
- **Since no laboratory can address all identified strengths, weaknesses, opportunities, and threats** within one plan period, the business planner should rank them according to how critical they are to the laboratory.

□ Stakeholder Analysis

Learning Objectives:

By the end of this session, the participants should be able to:



- identify and prioritize the laboratory's key stakeholders
- identify and prioritize what the laboratory expects from these stakeholders
- identify and prioritize what the stakeholders expect from the laboratory

- A stakeholder is any person, group, or organization that can place a claim on the organization's resources, attention, or output, or is affected by its output.
- A stakeholder analysis is the means for:
 - identifying and prioritizing who the internal and external customers/stakeholders are;
 - how they evaluate the organization;
 - how they influence the organization;
 - what organization needs from them; and
 - how important they are.
- Stakeholder analysis is the **review and consideration of the impact stakeholders** have on the operations of our laboratory's business plan.

6.3 Summary

- **SWOT Analysis** is a planning tool that provides an overall view of the most important factors influencing the future of the laboratory.
- The analysis looks at the **internal and external environment** impacting on your laboratory.
- A **stakeholder is any person, group, or organization that can place a claim on the organization's resources, attention, or output, or is affected by its output.**
- There are **two broad categories of stakeholders: Internal stakeholders** (employees, management, Board of Directors, etc) and **External Stakeholders** (customers, suppliers, Government, etc)

6.4 Activity and Self- Assessment Questions (Annex 7: Worksheet 7) (Module 7)

MODULE 7: CRITICAL SUCCESS FACTORS

7.1 Learning Objectives:

By the end of this session, the participants should be able to:



- i. Define critical success factors (CSFs)
- ii. Identify critical success factors;
- ii. Understand why it is necessary to identify and prioritize critical success factors
- .v. Relate identified CSFs with success or failure of the plan
- v. Answer questions related to critical success factors

7.2 Session Content

- Critical Success Factors (CSFs) are key elements which if put in place will ensure success of the laboratory.
- CSFs, also known as Key Results Areas (KRAs), are the essential areas of activity that must be performed well if you are to achieve the mission, objectives or goals for your Lab.
- By identifying Critical Success Factors, one can create a common point of reference that helps to direct and measure the success of your Lab.
- CSFs are characteristics, conditions, or factors that have a direct and **significant** impact on the **relevance, effectiveness, efficiency, and financial viability of your Lab.**
- These factors can be both **quantitative** and **qualitative** and are used to describe if a business (Lab) is successful.
- It is important to have a good understanding of the **environment, the industry and the business** in order to describe them well.
- To identify possible CSFs, you should examine the **mission** and **objectives** and see which areas of the Lab need attention.
- Once you have a list of CSFs, it is time to consider what is absolutely essential and so identify the truly Critical Success Factors.
- Therefore success in determining the CSFs for your Lab is to determine what is central to its future and achievement of that future.

7.3 Summary



- Critical success factors are those elements that must be handled well to ensure success for a Laboratory.
- They represent those managerial or laboratory areas that must be given **special and continual attention to bring about high performance.**
- CSFs include issues vital to a Laboratory's current **operating activities and to its future success.**

7.4 Activity and Self- Assessment Questions (Annex 7: Worksheet 8) (Module 8)

MODULE 8: STRATEGIC FRAMEWORK

8.1 Learning Objectives

By the end of this session, the participants should be able to:



- Formulate vision, mission and core values
- Describe what they want the laboratory to look like in ideal terms in the future
- Describe the results they will be achieving and characteristics the laboratory will need to possess in order to achieve those results.

8.2 Session Content

A: Laboratory Vision Statement

- A vision is an inspiring view of the preferred future.
- A vision is a journey from the known to the unknown, creating the future from current facts, hopes, dreams and opportunities.
- The vision statement describes what we want the organization to look like in ideal terms in the future: the results we will be achieving and characteristics the organization will need to possess to achieve those results.
- The Strategic Vision Statement provides direction and inspiration for the organization's goal setting.
- Through the vision statement, the organization attempts to respond to the challenges and issues expressed in the form of strategic issues.
- The vision may apply to entire organization or to the laboratory entity
- **Qualities of a good Vision Statement**
 - ✓ Presents where we want to go.
 - ✓ Easy to read and understand.
 - ✓ Captures the desired spirit of an organization.
 - ✓ Compact – can be used to guide decision making.
 - ✓ Gets people's attention.
 - ✓ Describes a preferred and meaningful future state.

- ✓ Gives people a better understanding of how their individual purpose could be realized in the group.
- ✓ Provides a motivating force, even in hard times.
- ✓ Is perceived as achievable and at the same time is challenging and compelling.

B: Laboratory Mission Statement

Learning Objectives:

By the end of this session, the participants should be able to:



- ✓ Describe their laboratory in terms of what they do; with/ for whom they do it; their distinctive competence (how they do it differently, better, more effectively than others); and why they do it.

- A mission statement embraces three key issues, namely, the functions or activities performed by the organization; the products or services provided by the institution; and the driving force of the organization.

Steps in developing a mission statement;

- Describe **what** your laboratory does e.g. trade facilitation and food security.
 - Describe **how** your company does what it does, e.g. “offering testing services for quality and/or safety assessment of agricultural commodities for conformity to standards”.
 - Give a general description, e.g. by incorporating one of your core values into your description.
 - Put your new mission statement to work
- If a Mission statement already exists, the focus of this step is on reviewing it in light of the emerging Vision statement and if necessary revising the language.
 - Here are some questions that can aid in the review of an already existing mission statement:
 - ✓ Is the mission statement clear and on target in today’s operating environment?
 - ✓ Do you have any specific questions or concerns with respect to the mission statement?

- ✓ Does the Mission statement duplicate the mission of any other organization?
- The mission statement should explain why your customers/and or clients want to do business with you.
- Make your mission statement visible in your premises, website, marketing materials, etc.

C: Laboratory Core Values

Learning Objectives:

By the end of this session, the participants should be able to:



- ✓ Define core values
- ✓ Describe their laboratory's core values

❖ Core values of a business entity

- are principles or **beliefs** that guide laboratory staff as they pursue the organization's purpose.
- describe **standards** governing operations of an organization and its relationships with customers, suppliers, employees, community, society and other stakeholders.
- Inform the customers and staff about the business's top priorities and what its core beliefs are.
- Remind employees about the organization's priorities and goals
- Should be simple, straightforward, and clear
- Businesses often use **value statements** to help them identify and connect with targeted customers.

❖ Example of Core Values

- Commitment to fair policy environment.
- Professionalism in its operations.
- Reliability in service delivery.
- Selection of service delivery personnel on merit at all times
- Teamwork and commitment to obligations.
- Integrity and trustworthiness.
- Accountability and transparency.

D: Laboratory Goals, Objectives and Strategies

Learning Objectives:

By the end of this session, the trainees should be able to:



- Define goals, objectives and strategies of the organization
- Distinguish between goals, objectives and strategies
- Develop the laboratory goals, objectives and strategies

- A **goal** is a brief, clear statement of an outcome to be reached. A goal is a broad, general, tangible, and descriptive statement. It does not say how to do something, but rather what the results will look like. It is measurable in terms of quality and quantity.
- In comparison, an **objective** is specific, measurable, actionable, realistic, and time-bound (SMART). **Objectives** define the actions that must be taken to reach the goal.
- A goal states where you want to be and objectives are the steps taken to reach there.**
- A **strategy** states how you are going to achieve a particular **objective**. People often fail to attach specific strategies to specific objectives and so one is left guessing what needs to be done to achieve each objective.

- A good business plan pursues realistic goals and objectives. Apply the “SMART” approach when developing your plan.

❖ **What are specific goals and objectives in Business Planning?**

- Specific means that the goals and objectives are concrete, detailed, focused and well defined.
- They must be straightforward and emphasize the **action** and the required **outcome**. They should be results and action-orientated.
- Specificity is usually linked to some mathematical determinant that imprints a specific character to a given action. Most common measures (indicants) are numbers, ratios and fractions, percentages, and frequencies. In this case, being "specific" means being "precise“.

When setting goals and objectives ask the following questions:

- a. What am I going to do?

This is best described using strong, action verbs such as conduct, develop, build, plan, execute, etc. This helps your goals and objectives to be action-orientated and focus on what is most important.

- b. Why is this important for me to do? For whom am I doing it?
- c. Is the objective well understood?
- d. Is it clear where this will happen?
- e. Who is going to do what? Who else needs to be involved?
- f. When do I want this to be completed?
- g. How am I going to do it? What strategies will be used?
- h. Is the outcome clear?
- i. Will this objective lead to the desired results?

❖ **What are Measurable goals and objectives?**

If the goal or objective is measurable, it means that the measurement source is identified and we can track the actions as we progress towards achieving it. Measurement is the standard used for comparison. For example:

1. Our laboratory business must grow is not a measurable goal.
2. Our business must grow in sales volume with an increase of 30% annually is measurable.

If you cannot measure it, you cannot manage it. It is important to have measures that will encourage and motivate you along the way. Measurements (and visible progress) go a long way to help us to know when we have achieved our goals and objectives.

❖ **What are Achievable goals and objectives?**

- Whatever you say in your Business Plan must be achievable. You should think about staff capacity (numbers and qualifications), staff motivation, and laboratory capacities (equipment and other infrastructure) among other requirements.
- If the goal and objective are too far in the future, you will find it difficult to be motivated and to strive to attain them.
- Goals and Objectives, unlike your aspirations and visions, need to be achievable to keep you motivated. They need to stretch you, but not so far that you become frustrated and lose motivation. In some cases, it may be advisable to set up **intermediate aims**.
- Guiding questions to help you set achievable goals and objectives.
 - ✓ Can we get it done in the proposed timeframe?
 - ✓ Do I understand the limitations and constraints?
 - ✓ Has anyone else done this successfully?
 - ✓ Is this possible?

❖ **What are Realistic Goals and Objectives in Planning?**

Goals and Objectives that are achievable may not be realistic. **Realistic means that you have the resources to get it done.** It is important to set goals or objectives that are applicable to the nature of your business and you will get benefit from achieving them.

The achievement of an objective requires resources such as skills, money, and equipment. Whilst keeping objectives realistic, ensure that they stretch you. Most objectives are achievable but may require a change in your priorities to make them happen.

Guiding questions:

- ✓ Do I have the resources available to achieve this objective?
- ✓ Do I need to revisit priorities in my life to make this happen?
- ✓ Is it possible to achieve this objective?

❖ **What is timeliness in Business Planning?**

Time-bound means setting deadlines for the achievement of the goal or objective. Deadlines need to be both achievable and realistic. **Start and end dates should be set.** If you don't set a time you will reduce the motivation and urgency required to execute the tasks. Agreed timelines create the necessary urgency and prompts action. Guiding questions include:

- When will this objective be accomplished?
- Is there a stated deadline?

❖ **Strategy**

- A strategy is a means of achieving objectives. There are many roads that lead to a destination. For instance, **we have growth strategies, stability strategies and retrenchment strategies.** Growth strategies **expand** the organization activities; stability strategies **make no change** to the organization's current activities; and retrenchment strategies **reduce** the organization's level of activities. Therefore strategy is about making choices.

8.3 Summary



- In this session we have learned how to establish and differentiate between **vision, mission and core values.** Additionally we have learned how to distinguish between **goals, objectives and strategies.**
- Finally, the steps of establishing/setting measurable goals and objectives were explained in details.

8.4 Activity and Self- Assessment Questions (Annex 9: Worksheet 9)

MODULE 9: OPERATIONS/PRODUCTION PLAN

9.1 Learning Objectives

By the end of this session, the trainees should be able to:



- Identify the quality systems relevant to their laboratory
- Identify the relevant accreditation organization(s) and/or international certification bodies.
- provide description of the laboratory design/layout and other facilities
- outline the basic elements of laboratory organization, capacity and logistics
- describe the effects of location of the laboratory to the customers
- evaluate staffing levels, develop training need assessment manual and job description for the personnel

9.2 Session Content

- Operations transform resources or inputs into goods, services, or results, and create and deliver value to the customers.
- An operations plan describes how the laboratory will achieve its vision, goals, objectives and strategies described in the larger strategic or business plan.
- The Plan covers the following major areas:
 - ✓ facilities
 - ✓ labour
 - ✓ materials
 - ✓ Equipment
 - ✓ Methods
 - ✓ processes

Facilities-laboratory set up

- This is an important part of the business plan. It should list all necessary investments.
 - ✓ ISO 9001, ISO 14 000, ISO/IEC: 17025 and Good Laboratory Practice (GLP) implementation
 - ✓ Waste disposal procedures available.
 - ✓ Continuous power and quality water supply

- ✓ well segregated working areas as may be necessary, e.g. separate room for storage and preparation of reference materials, glassware washing areas, instrument rooms etc

Facilities-location

- The laboratory accessibility by customers, suppliers and service providers is important
- Not all types of samples can be transported over long distances
- **Satellite reception points** can be considered depending on the customer location and sample types
 - ✓ **microbial analyses samples** require a shorter time between sampling and reception in the laboratory
 - ✓ **chemical analyses samples** time requirement from sampling to reception in the lab is dependent on the sample type.

Labour-expertise

- The plan will among other things:
 - ✓ specify the names and functions of the staff, and their competences.
 - ✓ Include training projections

Materials

- The laboratory will provide procedures for ensuring continuous availability and accessibility of laboratory consumables.
- It is important to:
 - have a list of prequalified suppliers.
 - have established re-order levels.

Equipment and method validation

- Describe the availability of the relevant equipment
- Describe maintenance procedures
- List methods of testing, their validation and accreditation status

□ Processes

➤ Short term processes

- performed to serve customers every day e.g. the path of workflow from sampling to test report dispatch.
- service-oriented businesses have processes to identify new areas of customer interest, to continually update service features, etc.

➤ Long term processes

- The overall business milestones that the company must attain to be successful
- List the key milestones that the organization must reach, and the target date for achieving them.
- Sample milestones include expected dates when:
 - ✓ New products and services will be introduced to the marketplace;
 - ✓ Revenue milestones will be attained;
 - ✓ Key partnerships will be executed;
 - ✓ Key financial events will occur; and
 - ✓ Key employees will be hired.

➤ Long-Term Processes-Business Milestones

- The milestone projections presented in the **Operations Plan** must be consistent with the projections in the **Financial Plan**.
- Presenting a plan in which the company grows too quickly will show the naivety of the management team
- A conservative growth plan will often fail to excite the potential development partner or investor who will require a high rate of return over a relatively short time period.
- Operations planning require communication with authorities and stakeholders
- Consider samples/analyses requiring fast results for the authorities or customers to act, for instance to withdraw a batch from the market because of risks.

- The business plan should mention
 - ✓ why location, organization structure and the products which are to be tested were chosen; and
 - ✓ state that the chosen business model (method of how the laboratory and its staff are financed) will work.
- The operations plan must be reviewed and updated regularly to ensure that the company is meeting outlined objectives.

9.3 Summary



- In this session, the following key elements were considered: laboratory organization, capacity and logistics; proximity, staffing levels and expertise, equipment, procedures and methods, communication to customers and other stakeholders.

9.4 Activity and Self- Assessment Questions (Annex 10: Worksheet 10)

MODULE 10: MARKETING PLAN

10.1 Learning Objectives

By the end of this session, the participants should be able to:



- Define marketing planning.
- Describe the steps in marketing planning.
- Describe the contents of a marketing plan.

10.2 Session Content

- Marketing planning can be defined as deciding in advance what to do, how to do it, and who is to do it.
- The term marketing planning is used to describe the methods of applying marketing resources to achieve marketing objectives
- The stages in the preparation of a marketing plan are to:
 - ✓ Set Corporate Objectives
 - ✓ Carry out external marketing research
 - ✓ Carry out internal marketing research
 - ✓ Carry out SWOT analysis
 - ✓ Make assumptions regarding the future
 - ✓ Set marketing objectives and estimate expected results
 - ✓ Generate marketing strategies and action plans
 - ✓ Define programs (who does what, when, where and how)
 - ✓ Set budgets
 - ✓ Write plan
 - ✓ Communicate the plan
 - ✓ Review and update
 - ✓ Summary

The materials covered in Module 4 on Market Analysis are critical to the development of a realistic marketing Plan.

Contents of a Marketing Plan

S/No	Description	Purpose
1	Executive Summary	A brief summary of the marketing plan
2	Analysis of current marketing situation	An analysis of trends and changes in the marketing environment, the market situation, customers and competitors
3	Assessment of opportunities and problems	The major opportunities and threats (both inside and outside the laboratory) facing the product/service for which the plan is being developed
4	Marketing Objectives	The goals and objectives to be achieved through the marketing plan in such areas as customer satisfaction, sales volume, market share, profit etc
5	Marketing strategies	The overall marketing strategy (market segmentation and product, price, promotion, and distribution activities) that will be used to achieve the objectives
6	Action programs	Pinpoints who is responsible for the marketing activities and establishes budgets and timetables for executing the marketing strategies
7	Projected profit and loss statements	This summarizes the expected financial pay off from the Marketing Plan
8	Monitoring and Evaluation (Control) Tools	Details the procedures for monitoring the plan over time and for taking corrective action if needed

10.3 Summary



- Marketing planning can be defined as deciding in advance what to do, how to do it, and who is to do it.
- The term marketing planning is used to describe the methods of applying marketing resources to achieve marketing objectives
- Marketing Planning is used to:
 - ✓ Segment markets
 - ✓ Identify market position
 - ✓ Forecast market size
 - ✓ Plan viable market share within each segment.

10.4 Activity and Self- Assessment Questions (Annex II: Worksheet II)

MODULE 11: HUMAN RESOURCE PLAN

11.1 Learning Objectives:

By the end of this session, the participants should be able to:



- Undertake staffing gap analysis/staffing levels
- Identify training needs for various cadres of staff
- Plan for Staff Induction training
- prepare an organizational structure
- develop incentives mechanisms for staff
- Appraise the impact of training
- Conduct performance appraisals for staff

1: Definition of Human Resource:

- Human resource refers to the staff that operate an organization.
- A human resource is a single person or employee within an organization.
- Human resource department deals with the people and issues relating to compensation, hiring, training, and performance management.
- Human resource is symbolized by knowledge, skills, commitment, values and motivation of people working in the organization.
- Human resource is a very important resource in an organization as it has the capacity to utilize financial and material resources in advancing the Vision, Mission and Goals of the organization

2: Human Resource Planning Process

2:1 Steps of Human Resource Planning Process

Step 1: Determine the Objectives of Human Resource Planning

- Involves identification of Objectives for which the process is carried out in order to ensure selection of the right number of people for the right kind of job.
- Objectives can vary across sections in the organization. That is personnel demand in marketing, finance and operations function are likely to differ

Step 2: Analyze Current Staff Inventory

- It deals with analyzing the current personnel in the organization in terms of expertise, competency, skills, etc. required to perform a particular job.

- Estimation of new vacancies so as to plan for personnel from the **internal** (within the current employees) and the **external** (hiring candidates from outside source).
- This is expected to ensure that reservoir of **talent** is maintained to meet any vacancy arising in the near future.

Step 3: Forecast Demand and Supply of Human Resource

- An inventory of talented human resource is used to match the demand for staff in the future with available resources within the organization or new employees.
- The required skills of personnel for a particular job should be matched with the job description, specifications and appropriate remuneration.

Step 4: Analyze the Staff Gaps

- Involves establishing the staff requirements.
- Shedding off staff in case of oversupply in form of termination, transfer, lay-offs, etc.

Step 5: Employment Plan/Action Plan

Revolves around developing a plan in case of deficit for the purposes of:

- Recruiting new staff
- Retaining the existing staff
- Carrying out inter-departmental transfers
- Retiring and laying-off staff

Step 6 (i) Training and Development

- Training and Development is meant for both new and existing employees who are required to update their skills from time to time.
- New employees require being inducted into the organization on how to utilize their expertise productively and in line with mission, vision and core values of the organization.

Step 6(ii) Identifying Training Needs

- Training is the process of gaining skills (competencies) and knowledge to perform an activity effectively and efficiently.
- Employees do not “walk” into a job with all the skills, knowledge and attributes required to do their work to an optimum level.
- There is a requirement for some form of training or knowledge development.
- Training and development is also useful in up-skilling the existing employees into higher positions or to taking on different roles in the business.

Step 6(iii) Training Needs Analysis (TNA)

- Training is an investment in an organization which can lead to:
 - ✓ increased productivity
 - ✓ enthusiastic staff,
 - ✓ higher morale,
 - ✓ increased profit
 - ✓ a positive reputation.
- You will need to determine what training needs of employees are in order (particularly new employees) to ensure that they are able to complete the work they are required to do.
- This process is commonly referred to as a training needs analysis (TNA).
- A TNA will help you to identify what training might be required to bridge the gap between an employee's current skill level and the skill level that you need them to have.
- To make sure your training investment is properly targeted, consider:
 - ✓ the role of each staff member and what you want them to achieve and contribute to your laboratory; and
 - ✓ whether each staff member has the skills and knowledge to do what you need them to do.

Step 6(iv): Steps in Developing an Organization Structure (Chart)

- An organizational chart is a picture or shape-based breakdown of a laboratory's internal divisions and employee reporting structure, and chain of command.
- An organization chart shows at a glance how each division or department of the business works together to make the laboratory profitable, and demonstrates where the individuals of each department or division fits within the internal personnel structure.
- Organizational structure (chart) is fairly uniform, and consists primarily of tiers of rectangular boxes that represent:
 - ✓ Individuals
 - ✓ offices or divisions; and
 - ✓ the lines connecting them to demonstrate reporting structure.

Step 7: (i) Appraisal of Human Resource Plan

- Involves evaluation of the effectiveness of the human resource planning process.
- Here the human resource plan is compared with its actual implementation for the purposes of identifying the success of the plan and controlling areas of deficiency.
- Appraisal is also used to reward performers and sanction non-performers.
- Human resource planning is a continuous process that begins with the objectives of Human Resource Planning and ends with the appraisal or feedback and control of the planning process.

Step 7: (ii) Human Resource Planning and Staff Motivation

- There are many theories (models) of motivating staff. The models include Herzberg's two factor theory, Maslow's hierarchy of needs theory, and stimulus-response model of employee behavior.
- Some are content-based while other are process-based tools of motivating staff
- Herzberg (1959) proposed two factor theory of motivating staff through:
 - ✓ Motivator factors
 - ✓ Hygiene factors

A: Hygiene Factors include:

Pay

- Pay structure should be appropriate, reasonable, equal and competitive to those in the same industry.
- Organizational policies should not be too rigid and should be fair and clear.
- Fringe benefits should be offered e.g. healthcare that also includes the family e.t.c
- Working conditions – clean, safe and hygienic.
- Equipment and other resources should be available and well maintained.

Job security

- One's status in the organization should be defined by:
 - Name of the Job holder
 - Job position and grade
 - Department
 - Job tasks, responsibilities and reporting line(s)
- Interpersonal relations must be appropriate and acceptable between peers, superiors and subordinates.

All these maintenance/hygiene factors are symbolized as physiological needs which must be fulfilled to avoid dissatisfaction. They are necessary but not sufficient conditions for staff motivation.

B: Motivation Factors

- Recognition – Praise for deserved achievement by managers.
- Sense of achievement – Job well done brings self fulfilment.
- Growth and promotional opportunities.
- Responsibility – employee feels responsible for their work, this way needs for external control is minimized.
- Meaningfulness of the work – the work must be challenging, interesting and meaningful to an employee
- These motivators are associated with psychological needs and satisfaction.
- The two sets of factors (hygiene and motivational) must exist for the staff to be motivated to peak performance.

11.3 Summary



- Human resources are most valuable resource for any organization. They manage other resources. Having and using the right staff in the right positions can make the difference between success and failure.

11.4 Activity and Self- Assessment Questions (Annex 12: Worksheet 12)

MODULE 12: COSTING, PRICING AND BREAK EVEN ANALYSIS

12.1 Learning Objectives

By the end of this session, the participants should be able to:



- Understand terms used in costing, pricing and break-even analysis
- Learn to determine whether or not the venture will make a profit.
- Carry out a breakeven analysis for your laboratory
- Identify factors that influence pricing

12.2 Session Content

□ Definition of Terms

- **Costing** -the process of establishing the exact amount paid to produce or provide a product or a service.
- **Fixed costs**- costs that do not change with the level of production. They are incurred even if no production or operations take place e.g. rent of premises, accreditation fees, and staff salaries.
- **Direct costs**- directly connected with the production of products or services, e.g. cost of consumables and labor.
- **Variable costs**- directly related to the level of production or operations. Increase or decrease in direct proportion to the level of production
- **Indirect costs**- relate to the running of the business but not directly to the laboratory processes e.g. building maintenance costs, equipment, electricity, and interest on the loan.
- **Profit** -The money a business makes after accounting for all expenses.
- **Revenue** -The total amount of sales during a specific period,
- **Price**-The sum or amount of money or its equivalent for which anything is bought, sold, or offered for sale.
- **Sales Volume** -Quantity or number of goods sold or services rendered in the normal operations of a firm in a specified period.

Expenditure

- Actual payment of cash or cash-equivalent for goods or services

Break-even point

- Where you are making no losses and earning no profits e.g. the breakeven price for selling a product would be the sum of the unit's fixed cost and variable cost incurred to make the product.

Break even analysis

- A breakeven analysis is used to determine the volume of sales your business needs to start making a profit.
- Useful when developing a pricing strategy, either as part of a marketing plan or a business plan.

Simple Formulas

- $\text{Price} = \text{Cost} + \text{Profit}$
- $\text{Revenue} = \text{Price} \times \text{sales volume}$
- $\text{Expenditure} = \text{Material} + \text{Labor} + \text{Transportation} \dots$
- $\text{Profit} = \text{Revenue} - \text{Expenditures}$

Man-Power Cost (MPC)

- You need 1 Researcher for 2hrs + 1 Technician for 3hrs to carry out a test.
- Working month is 160 hours.
- Salary - Researcher=\$1000 pm, Technician=\$700 pm

Calculate the man power cost (MPC)

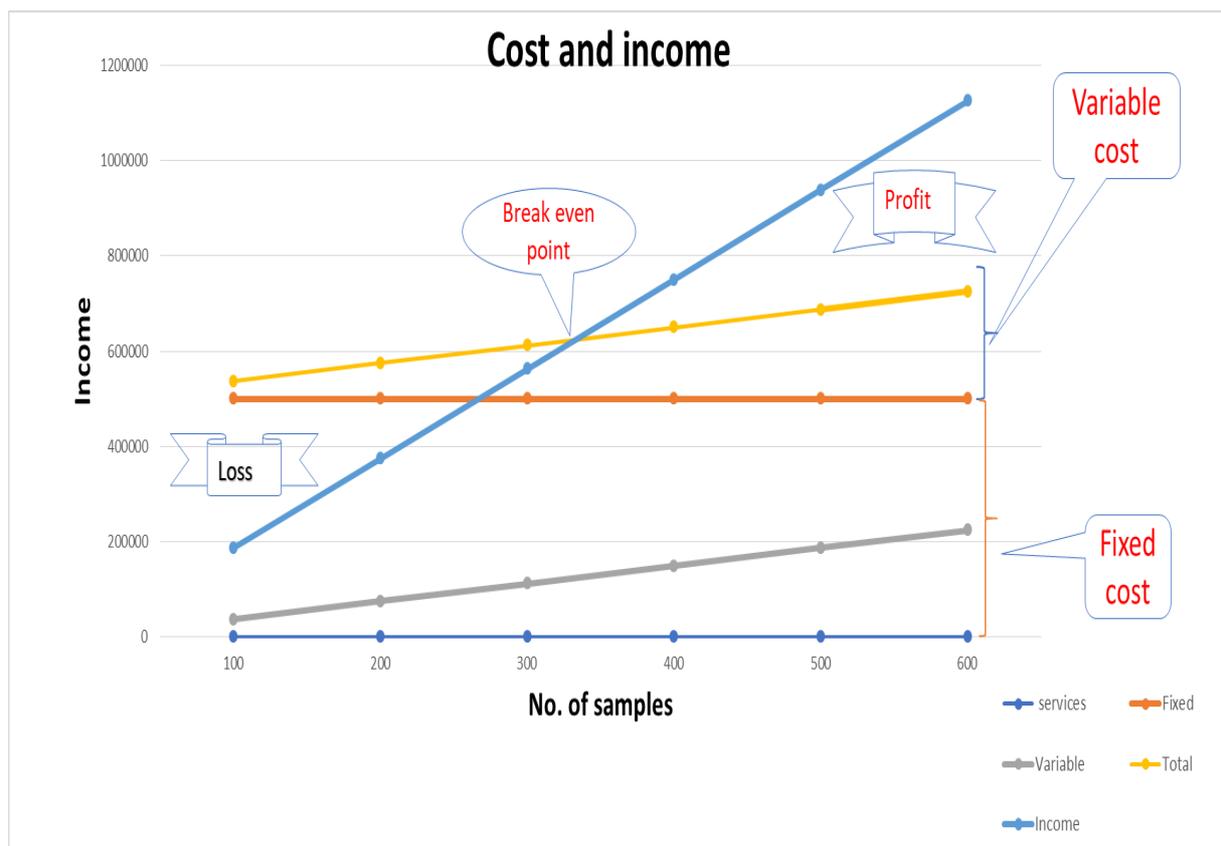
Variable costs

Sample type	Price	Variable cost
1	1000	200
2	2000	400
3	1500	300
4	1250	250
5	2500	500
6	3000	600
Average	1875	375

Cost and income

No of samples tested	Fixed cost	Variable cost	Total cost	Income
100	500,000	37,500	537,500	187,500
200	500,000	75,000	575,000	375,000
300	500,000	112,500	612,500	562,500
400	500,000	150,000	650,000	750,000
500	500,000	187,500	687,500	937,500
600	500,000	225,000	725,000	1,125,000

□ Break-Even Analysis



□ Making and Increasing Profit

- Have you developed your pricing policy?
- Can you set your pricing policy?
- Which of the following pricing strategies best suits your business?
 - ✓ competitive position
 - ✓ pricing below competition
 - ✓ pricing above competition
 - ✓ multiple pricing
 - ✓ pricing based on cost-plus-mark-up
 - ✓ other

□ **How to Increase Profit**

➤ Do one or both of the following

- Increase Revenue.
- Reduce Expenditure.

□ **Enhance marketing effort through the Ps of Marketing**

- a planned mix of controllable elements of a product's marketing plan commonly termed the 4P's
 - ✓ product
 - ✓ price
 - ✓ place (distribution)
 - ✓ promotion
- These elements are adjusted until a right combination is found that serves the customers' needs while generating optimum revenue.

□ **Increase revenue by:**

- Selling more by reducing price
- Aggressively promoting the product
- Making the product available when and where customers want it
- Making the product more attractive.
- Improving product quality
- Reducing expenditure by taking measures on cost components between the producer and consumer.
- Examples of reducing expenditures include;
 - ✓ Joining with other traders to reduce the cost of transportation or selling costs
 - ✓ Acquiring supplies from more affordable sources

12.3 Summary



- Costing and pricing of products and services is at the heart of any successful business venture.
- If the laboratory business is to prosper it is vital that the staff is imparted with the necessary knowledge and skills to carry out costing and pricing of their activities.

12.4 Activity and Self- Assessment Questions (Annex 14: Worksheet 14)

MODULE 13: FINANCIAL PLAN

13.1 Learning Objectives

By the end of this session, the trainees should be able to:



- Define the concept of financial analysis
- Undertake financial analysis for a laboratory
- Relate financial analysis and pricing of laboratory services.

13.2 Session Content

Definitions

- **Financial plan:**
 - ✓ a comprehensive evaluation of an investor's current and future financial state by using currently known variables to predict future cash flows, asset values and withdrawal plans.
- **Financial planning:**
 - ✓ the task of determining how a business will afford to achieve its strategic goals and objectives
- **Financial analysis:**
 - ✓ examination of a business from a variety of perspectives to fully understand the bigger financial situation and determine how best to strengthen the business.
- Financial analysis can be reduced to accounting for all
 - ✓ Incomes and expenses;
 - ✓ Assets and debts (liabilities);
 - ✓ Investment and depreciation.

□ Financial Analysis

Covers:

- ✓ Incomes
 - ✓ expenses
 - ✓ value stream
 - ✓ cash flow.
- To evaluate the feasibility of a laboratory service, a detailed focus on expenses, income from the service and funding for development and investments is required.

□ Financial Planning Activities

- Assessment of the business environment
- Confirming the business vision and objectives
- Identifying the types of resources needed to achieve these objectives
- Quantifying the amount of resource (labour, equipment, materials) required
- Calculating the total cost of each type of resource
- Summarizing the costs to create a budget
- Identifying any risks and issues with the budget set.

□ Tables 1 and 2 depict the principal elements of a financial plan.

Table 1: Financial planning for a laboratory

COSTS	Year 1	Year 2	Year 3
I. Investments			
Infrastructure: General			
Building			
Electricity generator			
Computers (hardware)			
Vehicle			
Furniture			
Infrastructure: Laboratory			
Cost of laboratory furniture (tables, shelves, special cupboards, lab benches, fume hoods)			
Cost to fit out storage area (freezers etc.) and for acclimatization (control of temperature, humidity)			
Cost of larger laboratory equipment			
Cost of smaller laboratory equipment			
Other costs			

COSTS	Year 1	Year 2	Year 3
2. Operation Costs			
Cost for running the laboratory			
Cost of disposables (reagents, chemicals, test kits) for the laboratory			
Cost of glassware			
Cost of software e.g. analysis software			
Server cost			
Calibration costs			
Other costs			
Staff, management and outsourced services			
Salary management			
Salary Staff			
Salary subcontractors			
Security costs			
Legal, tax advice, consulting fees			
Cost of other outsourced activities			
Overhead costs			
Insurance			
Rent			
Communication fees (phone, Internet, mail)			
Server fees			
Water			
Electricity			
Fuel, heating			
Waste disposal			
Travel			
Membership fees in organizations			
Fees for training of staff			
Advertising costs			
Other costs			
3. Capital costs (interests, loans)			
Capital costs (interests, loans)			
Depreciation			
Total Costs			

Table 2: Profit and Loss

PROFIT AND LOSS	Year 1	Year 2	Year 3
Revenues			
Revenues from analytic services			
Revenues from training			
Revenues from consulting			
Income from governmental grants			
Income from stakeholders (membership fee and other contributions)			
Loans			
Expenses			
Cost for tangibles (investment into infrastructure, large laboratory equipment etc.)			
Operation costs			
Salaries (management, staff, contract services)			
Overhead costs			
Capital costs			
Resulting Profit/Loss (Revenues minus Expenses)			
Cash			

13.3 Summary



- Financial planning is essential for any business.
- Prudent management of available resources is critical to the survival of a business.
- It is therefore imperative that laboratory personnel are knowledgeable about the various financial concepts and possess skills for developing financial plans for their Laboratories.

13.4 Activity and Self- Assessment Questions (Annex 13: Worksheet 13)

MODULE 14: RISK AND RISK MANAGEMENT

14.1 Learning Objectives:

By the end of this session, the participants should be able to:



- Define risk
- Identify various types of risks
- Describe a risk management plan
- Describe elements of a risk management plan

14.2 Session Content

Business Risks

- **Definition-** According to ISO 31000, risk is the “effect of uncertainty on objectives”
- An effect is a positive or negative deviation from what is expected.
- A risk can affect the whole laboratory and may be beyond the control of the management.
- Risk assessment and contingency planning activities are therefore very important.
- Prioritize those risks which are most likely to be faced and those that will cost you the most if they happen.

Business Risk Analysis

Steps of Risk Analysis

- Risk identification
- Ranking of the risks, low to high
- Strategies to contain the identified risks by developing a contingency plan.
- Implementing the Strategies
- Continually monitoring the effectiveness of risk containment tasks

- Risk identification techniques include:
 - ✓ brainstorming
 - ✓ interviews
 - ✓ surveys
 - ✓ root cause analysis
 - ✓ review of past incident reports
 - ✓ SWOT analysis
- Assess risk interaction
- Ranking is by assessment of the risk in terms of:
 - ✓ Impact on business
 - ✓ Likelihood of occurrence

Summary of types of risk

Risk type	Example
Financial risk	Failure to meet sales and financial forecast
Operational risk	failure to maintain accreditation status
Human resource risk	loss of competent personnel and failure to replace them.
Economic risk	global economic conditions, e.g. depressed economies in trading partner states
Technological risk	Inability to upgrade equipment required in testing as standards evolve.
Political risk	Change of government and policies

□ Risk Management

- **Risk avoidance:** action is taken to halt the activities giving rise to risk, such as stopping a certain test that is no longer profitable.
- **Risk reduction:** action is taken to mitigate the risk of likelihood or impact or both, generally via internal controls.
- **Risk sharing or transfer:** action is taken to transfer a portion of the risk through insurance or outsourcing
- **Risk retention:** is the process of accepting the possibility of loss and budgeting to cover the risk

□ Contingency Plan

- Once identified the laboratory will put in place a mechanism for managing the risks.
- A contingency plan is a risk management tool or course of action designed to help an organization respond effectively to a significant future event or situation that may or may not happen.
- A contingency plan is also referred to as "Plan B," as it can be also used as an alternative for action if expected results fail to materialize.
- When preparing the plan ask the following questions:
 - ✓ What could happen?
 - ✓ What will we do in response?
 - ✓ What can we do in advance to prepare?
- **Critical considerations in contingency plans are:**
 - ✓ **Scope** – what particular risk the contingency plan is designed for.
 - ✓ **Initiation** – how you will know when to put the plan B into action.
 - ✓ **Actions** – what sequence of actions you will take in order to control the problem and minimize impact
 - ✓ **Roles and responsibilities** – who will do what and when
 - ✓ Good contingency plans are usually based on the shared experience working together.

- ✓ Businesses need to review their plans occasionally to make sure they are up to date, and that any **risk mitigating measures** such as availability of fire extinguishers, eye-wash stations, and alternative equipment are in good working order
- ✓ Contingency plans should also be evaluated after an emergency occurs to ensure that the plan worked the way it was supposed to and to make any necessary adjustments.



Summary

- Good risk management plans are usually based on the shared experience of managers working together.
- It is important to identify any risks as the identification of risks helps you come up with risk management to mitigate the risks.
- Risks include:
 - ✓ **Financial risks** (failure to meet sales and financial forecast etc.).
 - ✓ **Market risks** (threat from competitors, unforeseen industry trends etc.)
 - ✓ **Operational risks** (failure to maintain accreditation status, occupational health & safety risks etc.)
 - ✓ **Human resource risks** (loss of key persons, failure to recruit and retain quality employees etc.)
 - ✓ **Economic risks** (global economic conditions, unforeseen political economic, social and technological events etc.)
 - ✓ **Technological risks** (non-availability of required equipment, non-availability of technical support for maintenance of equipment etc.)
 - Other risks – (Business planning, Laboratory instability etc.)
 - ✓ **Other risks** (Political, Leadership, Business planning, Laboratory instability etc.)

14.4 Activity and Self- Assessment Questions (Annex 15: Worksheet 15)

MODULE 15: PLAN IMPLEMENTATION (ACTION PLAN) MATRIX

15.1 Learning Objectives:

By the end of this session, the participants should be able to:



- Define action plan
- Describe the elements of an effective action plan
- Develop an action plan matrix.

15.2 Session Content

Definition of action planning

- Action planning is the process that guides the day-to-day activities of a Laboratory.
- It indicates:
 - ✓ what activities are going to be undertaken;
 - ✓ by who;
 - ✓ When;
 - ✓ with what resources; and
 - ✓ the expected results.
- Most **action plans** consist of the following elements:
 - ✓ a statement of **what** must be achieved (the outputs or result areas that come out of the planning process);
 - ✓ a spelling out of the **steps (procedures)** that have to be followed to reach this objective;
 - ✓ some kind of time schedule **when** each step must take place and how long it is likely to take;
 - ✓ a clarification of **who** will be responsible for making sure that each step is successfully completed;
 - ✓ a clarification of the **inputs/resources** that are needed.

Table I: Format for an Implementation (Action Plan) Matrix

Critical Factor (Strategic Issue):

Goal:

Objective:

Strategy	Activity	Outcome/ output	Time frame	Performance indicators	Target Year 1	Target Year 2	Target Year 3	Action by	Assumptions/ Risks	Budget

Key drivers in the Implementation of Business Plan

In the implementation of the new business plan, the following are the critical success factors;

- Clear understanding of the business plan objectives, strategies, activities and targets for implementation by the Board and Management;
- Focused leadership and sheer commitment from the Laboratory’s top management in terms of decision making and implementation of business plan;
- Information sharing through effective communication between all implementers on activities and outcomes of each of the business plan themes;
- Ensuring that all activities are implemented in a time-phased fashion and in effective manner;
- Availability of human and financial resources in order to facilitate the implementation of each activity in the new Business Plan;
- Periodic review, performance oversight, measurement and reporting;
- Support from other institutions and key stakeholders;
- Creation of efficient systems of people and processes for the implementation; and
- A participatory approach with staff and leadership in setting of targets.

15.3 Summary



- Action plans are important for the following reasons:
 - ✓ action plans serve as a link between strategy formulation and monitoring and evaluation;
 - ✓ the action plan specifies what needs to be done differently from the way operations are currently being carried out;
 - ✓ during the evaluation and control process that comes later, an action plan helps in both the appraisal of performance and in the identification of any remedial actions;
 - ✓ the explicit assignment of responsibilities for implementing and monitoring the programs may contribute to better motivation of staff; and
 - ✓ trainees must be empowered to understand the concepts and to possess skills for developing proper action plan matrices.

15.4 Activity and Self- Assessment Questions (Annex I6: Worksheet I6)

MODULE 16: MONITORING AND EVALUATION

16.1 Learning Objectives

By the end of this session, the participants should be able to:



- Define monitoring and evaluation concepts
- Differentiate between monitoring and evaluation
- Identify monitoring and evaluation tools
- Develop effective and efficient M&E Tools

16.2 Session Content

- Monitoring is a **systematic** process of observing, **tracking**, and **recording activities** or data for the purpose of measuring plan **implementation** and its progress towards achieving **objectives**.
- Information gathered through monitoring is used to **analyze, evaluate** all of the components of a project or a department/section in **order** to measure its effectiveness and adjust inputs where necessary.
- **Evaluation** is the process by which plan inputs, activities and results are analyzed and assessed in order **to determine the effectiveness, impact and relevance of the plan implementation in light of the stated objectives**.
- The purpose of evaluation is to analyze objectives and achievements in order to maximize the **impact**, and **identify lessons learned** throughout the implementation period.

16.3 Summary

- Monitoring provides information that will be useful in:
 - ✓ Analyzing the situation in the laboratory and its projects;
 - ✓ Determining whether the inputs in the laboratory are well utilized;
 - ✓ Identifying problems facing the laboratory and finding solutions;
 - ✓ Ensuring all activities are carried out properly by the right people and in time;
 - ✓ Using lessons from one experience on to another; and

- ✓ Determining whether the way the business of the laboratory was planned is the most appropriate way.
- Evaluations should be conducted at the beginning and end of an intervention process.
- Evaluations should include collection of **baseline data** for comparison purposes.
- Evaluations are usually conducted to answer key questions on performance which include:
 - ✓ **Relevance:** adaptation of an organization to changing contexts and capacities and keeping its mission, goals, programmes, and activities agreeable to its key stakeholders and constituents
 - ✓ **Effectiveness:** the degree to which an organization moves toward the attainment of its mission and realizes its goals
 - ✓ **Efficiency:** provision of **high quality services** by an organization within an appropriate **cost structure**.
 - ✓ **Financial Viability:** To survive, an organization's **inflow** of financial resources must be greater than the **outflow**.
 - ✓ **Impact:** how well an organization has achieved the **changes** as a result of interventions. In other words, a measure of the extent to which an organization has achieved its objectives and longer term goal.

16.4 Activity and Self- Assessment Questions (Annex 17: Worksheet 17)

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ANNEXES & ATTACHMENTS
ANNEX A: LABORATORY SELECTION CRITERIA

1. Laboratory must be a legal entity
2. Laboratory scope should include testing of SPS related parameters in one or more of the following areas;
 - a. Plant health
 - b. Animal health
 - c. Food safety
3. Laboratory should be:
 - a. Functional
 - b. Supporting **TRADE** in agricultural products

Criteria for Selection of Laboratories

A1. Plant Health Laboratories

Laboratory category	Criteria	% Allocated Weight	% Score
Plant Health	Staffing and competency	30	
	Equipment and infrastructure	20	
	Tests undertaken in respect of priority products/ import and export	20	
	Output of laboratory Samples per year	15	
	Twinning arrangements including participation in proficiency testing	05	
	Laboratory Legal status and /or Designation in the partner states/region (<i>Score applies to category of the specific laboratory</i>) <ol style="list-style-type: none"> 1. Regulatory and Reference (10 points) 2. Regulatory (8 points) 3. Research (7 points) 4. In house (5 points) 	10	
	Total Score	100	

A2. Animal Health Laboratories

Laboratory category	Criteria	% Allocated Weight	% Score
Animal health		30	
	Staffing and competency	20	
	Equipment and infrastructure	20	
	Tests undertaken in respect of priority products/ import and export	15	
	Output of laboratory Samples per year	05	
	Twinning arrangements including participation in proficiency testing	10	
	Laboratory Legal status and /or Designation in the partner states/region (<i>Score applies to category of the specific laboratory</i>) <ol style="list-style-type: none"> 1. Regulatory and Reference (10 points) 2. Regulatory (8 points) 3. Research (7 points) 4. In house (5 points) 	10	
	Total Score	100	

A3. Food safety Laboratories

Laboratory category	Criteria	% Allocated Weight	% Score
Food Safety	Criteria	30	
	Staffing and competency	20	
	Equipment and infrastructure	20	
	Tests undertaken in respect of priority products/ import and export	15	
	Output of laboratory Samples per year	05	
	Twinning arrangements including participation in proficiency testing	10	
	Laboratory Legal status and /or Designation in the partner states/region (<i>Score applies to category of the specific laboratory</i>) <ol style="list-style-type: none"> 1. Regulatory and Reference(10 points) 2. Regulatory (8 points) 3. Research (7 points) 4. In house (5 points) 	10	
	Total Score	100	

ANNEX B: CRITERIA FOR SELECTING NOMINEES TO THE LABORATORY BUSINESS PLAN TRAINING

The participants for the business plan training should have **technical and policy background** on laboratory operations. Scoring will be based on the following tabulated criteria:

ID	Criteria	Basic minimum	% Weight	% Score
1	Education	At least Diploma in the relevant area of specialization.	25	
2	Bench experience	Minimum of 5 years relevant experience in laboratory experience dealing in plant health, animal health or food safety operations.	25	
3	Knowledge on Standards (IPPC, CODEX, OIE as appropriate)	Should have knowledge of SPS requirements in trade.	15	
4	Knowledge in Strategic planning	Participation in preparation of strategic plan documents will be an added advantage.	10	
5	Pre- training questionnaire submission	Should have supervisory roles in their respective laboratories	10	
6	Proficiency in MS Suite	Should be proficient in MS Office suite d.	5	
7	Gender inclusivity/ at least 5 years to retirement	Gender inclusivity will be observe	5	
8	Lab category/ No of tests undertaken including accreditation		5	
	TOTAL SCORE		100	

- The nominees should provide data on cost analysis of methods, volumes of samples handled and income /expenditure of their laboratory operations at the time of training.

ANNEX C: PREPARATION AND INSTRUCTIONS FOR PARTICIPANTS

Dear Participant,

It is time to start your technical preparation for the Training on “Laboratory Business Plans”.

The more prepared you are the more benefit you will draw from the week with our technical team in Nairobi.

You will be asked to actively participate in all sessions during the training whether you are presenting or in the audience. The learning process will be organized through a blend of technical presentations, question and answer sessions and practical group exercises. This will help in exchanging ideas in subjects linked to Laboratories and their place in SPS systems and the management of Laboratories as well as the inter-relationships and roles of the actors involved in the systems at national, regional and international level.

The training approach will include allotting time for each participant attending the training to present before the group and to prepare exercises in working groups. The presentations and practical group exercises are interrogated and appraised by the other participants, trainers with direct feedback and advice on improvement of both Technical content and presentation skills. **This approach is important as the participants will be expected to later train others in their laboratories.**

Given the extensive material to be covered during the training, participants need to arrive **prepared**.

→ We advise the following :

1. Computers will not be provided so please come adequately equipped with PC, USB keys and a good up to date anti-virus program.
2. Gather as much information as possible on your own Laboratory or those Laboratories which are key actors in your National Sanitary and Phytosanitary Systems in your country. **This will be extremely useful for practical exercises!**

Preparatory work for each participant

1. Each participant must prepare one presentation that gives an overview of their laboratory. Your presentation should be of professional standard and should last no longer than 20 minutes with a maximum of 10 slides covering the following items :
 - Identify and develop the qualitative goals of your laboratory
 - Identify the vision of your laboratory
 - Describe the laboratory’s environment (customers, competitors and other stakeholders)
 - List the services offered by your laboratory
 - Briefly describe the laboratory’s marketing plan, if any
 - Present a SWOT analysis for the laboratory (if available)

- Identify the critical success factors (CSFs) for your laboratory in order to develop or expand their business with regards to local market and/or regulatory requirements
- Provide some information about the laboratory market environment: market needs, customers and competitors.
- Provide detailed Standard Operating Principles (SOPs) for tests relevant to your lab.

The procedures must include:

- ✓ Analytical Procedures
 - ✓ Consumables and reagents
 - ✓ Equipment and materials
 - ✓ Analysis time
2. **Costs** related to all the elements necessary to carry out the tests according to the procedures
 - Consumables and reagents
 - Equipment
 - Personnel
 - Energy consumption
 - Participation to proficiency testing schemes
 3. Provide some information about the Pricing policy of your laboratory and available pricing data
 4. Provide a list of laboratories, private and public, offering the same services as your laboratories (your competitors in the market environment).

Copy your presentations on a USB key which should also be given to the Trainers on the first day. IMPORTANT: Save your presentations with a clear identification as follows “Your Name”-Title of Presentation.ppt. This will help us to find your presentation easily. Thank you in advance!

If you have any questions on the above instructions, please contact us as soon as possible.

Signed

East Africa Trade and Investment Hub

or

Promin Consultants Ltd

ANNEX 1: WORKSHEET 1: OVERVIEW OF LABORATORY BUSINESS PLANNING

1. Define Strategic Planning
2. Define Business planning
3. Describe the steps in the Strategic Planning process
4. Describe important reasons for business planning
5. Describe main steps of business planning

ANNEX 2: WORKSHEET 2: BUSINESS PLAN STRUCTURE

1. Draft a business plan template for a laboratory.
2. During the training include a summary of the information you will include in each section.
3. At the end of the training present, your Business Plan template with a summary under each section

ANNEX 3: WORKSHEET 3: YOUR LABORATORY PROFILE

In small groups of 3, participants to prepare a business profile for mock Laboratories;

- a. Food safety laboratory
 - i) Chemical
 - ii) Microbiology
- b. Plant health laboratory
- c. Animal health laboratory.

ANNEX 4: WORKSHEET 4: INTERNAL ANALYSIS

- I. An Internal Strength or Weakness is something over which an organization has direct control (location, staff, policies, procedures, resources, etc.). If you can do something about it, it is an **internal strength or weakness**. If it is not something over which the organization has control -- if you can't do something about it, it is an **External Change or Trend (population shifts, the economy, changes in technology, competition, etc.)**. Kindly identify the **3 biggest strengths** and **weaknesses** of your Laboratory.

Our THREE (3) Biggest Strengths:

- i) _____
- ii) _____
- iii) _____

Our THREE (3) Most Serious Weaknesses:

- i. _____
- ii. _____
- iii. _____

ANNEX 5: WORKSHEET 5: MARKET ANALYSIS

- i) List down your 5 major laboratory competitors
- ii) List down your 5 major laboratory customers

ANNEX 6: WORKSHEET 6: EXTERNAL ENVIRONMENT ANALYSIS

- Analyze your organization's EXTERNAL ENVIRONMENT (Political, Economic, Socio-cultural, Technological, Ecological, Legal factors) ANALYSIS and identify **3 opportunities** and **3 threats** to your organization.

Our THREE (3) Biggest Opportunities:

- i) _____
- ii) _____
- iii) _____

Our THREE (3) Most Serious Threats:

- i) _____
- ii) _____
- iii) _____

ANNEX 7: WORKSHEET 7: SWOT AND STAKEHOLDER ANALYSIS

- I. Write down the **strengths, weaknesses, opportunities and threats** identified in Sessions 4 and 5.

Our THREE (3) Biggest Strengths are:

- i) _____
- ii) _____
- iii) _____

Our THREE (3) Most Serious Weaknesses are:

- i) _____
- ii) _____
- iii) _____

Our THREE (3) Biggest OPPORTUNITIES (Favourable/positive conditions in the external environment) are:

- i) _____
- ii) _____
- iii) _____

Our THREE (3) Most Serious THREATS/Challenges (Unfavourable/negative conditions) in the external environment:

- i) _____
- ii) _____
- iii) _____

2. A stakeholder is any person, group, or organization that can place a claim on the organization's resources, attention, or output, or is affected by its output. As part of the Business Planning exercise, we need to analyse the **changing needs and expectations of stakeholders of our laboratory**. Complete these questions to the best of your knowledge:

- Who are your laboratory's **principal Stakeholders** and what do they expect from your laboratory? Please specify the type of laboratory. (Plant, Animal, Food safety)

Type of Laboratory _____

Name of Stakeholder	What stakeholders expect from the laboratory	What the laboratory expects from stakeholders
i)		
ii)		
iii)		
iv)		
v)		

ANNEX 8: WORKSHEET 8: CRITICAL SUCCESS FACTORS (CSFs)

- List 5 most critical success factors for the laboratory over the next 3 years.
- Explain how those factors influence performance of the laboratory.

ANNEX 9: WORKSHEET 9: STRATEGIC FRAMEWORK

I. VISION:

VISION describes what we want the laboratory to look like in ideal terms in the future: the results we will be achieving and characteristics of the laboratory that we will need to possess in order to achieve those results. **As you presently understand it, what do you see as the Vision of your laboratory?**

2. MISSION:

MISSION describes what we do, with/for whom we do it, WHY we do it, and our special competences. MISSION describes general purpose, "why we exist". **As you presently understand it, what do you see as the mission of your laboratory?**

3. CORE VALUES:

Values are principles or beliefs that guide organization members as they pursue the laboratory's purpose. Values describe **standards** governing operations of an organization and its relationships with customers/clients, suppliers, employees, community, society and other stakeholders.

List the **three most important core values** for your laboratory (What do you think the value statement should be?):

- i) _____
- ii) _____
- iii) _____

4. GOALS, OBJECTIVES AND STRATEGIES:

List down **3 goals and their corresponding objectives and strategies**.

- i) _____
- ii) _____
- iii) _____

ANNEX 10: WORKSHEET 10: OPERATIONS PLAN

Group Activity:

In groups, the participants shall:

- prepare simple layout of a laboratory facility indicating separation of working areas.
- list down factors considered when choosing the laboratory location.
- identify a suitable quality system for their respective labs.
- define laboratory organization structure and prepare staff job descriptions.

ANNEX 11: WORKSHEET 11: MARKETING PLAN

In groups, the participants shall:

- i. Describe the steps in marketing planning
- ii. Describe the contents of a marketing plan and the purpose of each section.

ANNEX 12: WORKSHEET 12: HUMAN RESOURCES PLAN

In groups,

- Prepare an organogram (Organizational chart) of a laboratory.

- Provide job descriptions of its management and technical team.

- Reflect on the benefits/incentives covered in the session and list those that apply in the laboratory.

ANNEX 13: WORKSHEET 13: COSTING, PRICING AND BREAK EVEN ANALYSIS

- What is break even analysis?
- Why is it useful?
- Who needs it?
- Using the data from your laboratory, work out a break even analysis and Include a graphical representation of the same. **Hint: Consider**
 - ✓ **Fixed costs**
 - ✓ **Variable costs**
 - ✓ **Sales price per unit**

ANNEX 14: WORKSHEET 14: FINANCIAL PLAN

In groups, develop a financial plan for a laboratory setup.

ANNEX 15: WORKSHEET 15: RISK AND RISK MANAGEMENT

- What is a risk?
- What are some of the risks in a laboratory business?
- What are some of the key considerations in a risk management plan for laboratory business plan?
- Identify three risks, determine the level of risk and explain measures that you can take to mitigate those risks.

Type of risk	Description of risk	Level of risk(low, medium, high)	Mitigating measures
e.g poor plan implementation	Failure of laboratory stakeholders to implement action identified in the implementation matrix	High –Can lead to collapse of business	Close monitoring of the implementation

ANNEX 16: WORKSHEET 16: IMPLEMENTATION (ACTION PLAN) MATRIX

- In groups identify a critical factor and develop a goal, objective, strategies and activities using the table below.

Critical Success Factor:

Goal:

Objective:

Strategy	Activity	Outcome/ output	Time frame	Performance indicators	Target Year 1	Target Year 2	Target Year 3	Action by	Assumptions / Risks	Budget

ANNEX 17: WORKSHEET 17: MONITORING AND EVALUATION

In groups, develop a monitoring and evaluation plan for a mock laboratory.

ANNEX 18: TRAINING SCHEDULE/PROGRAM

DAY 1 :		
TIME	SESSION	FACILITATOR
8.00 a.m – 8 :30	Arrival and Registration	• The Hub/Consultants
8.30 a.m. – 9 :00	<ul style="list-style-type: none"> • Opening Remarks • Introductions 	<ul style="list-style-type: none"> • The Hub/Consultants • Workshop Participants
9:00 – 10:00	<ul style="list-style-type: none"> • Workshop Objectives • Overview of Laboratory Business Planning (Module 1) 	Consultants
10:00 -10:30	Structure of a Business Plan (Module 2)	Consultants
<i>10:30-11:00 Health Break</i>		
11.00 – 12:00	Country Laboratory Profiles (Group Work and Plenary) (Module 2)	Workshop Participants
12:00 – 1:00	<ul style="list-style-type: none"> • Group Work on Internal Environment Analysis (Module 3) • Identification of strengths and weaknesses 	<ul style="list-style-type: none"> • Consultants • Workshop Participants
<i>1:00 – 2pm Lunch Break</i>		
2:00 – 3:00 pm	Plenary Session on Internal Environment Analysis (Module 3)	<ul style="list-style-type: none"> • Workshop Participants • Consultants
3:00 – 3:40	Group Work on Market Analysis (Module 4)	<ul style="list-style-type: none"> • Consultants • Workshop Participants
3:40 – 4:15	Plenary Session on Market Analysis (Module 4)	<ul style="list-style-type: none"> • Consultants • Workshop Participants
<i>4:15 – 4:30 Health Break</i>		
4:30 - 5:30 pm	<ul style="list-style-type: none"> • Group Work on External Environment (PESTEL) Analysis (Module 5) • Identification of opportunities and threats 	<ul style="list-style-type: none"> • Workshop Participants • Consultants
DAY 2 :		
TIME	ACTIVITY	FACILITATOR
8.30 a.m. - 8.45 a.m.	Recap of Previous Day Discussions	Consultants
8.45 - 9.45 am	<ul style="list-style-type: none"> • Plenary Session on External Environment Analysis (Module 5) 	<ul style="list-style-type: none"> • Workshop Participants • Consultants
9:45 -10 :30 am	Group Work on SWOT and Stakeholder Analysis (Module 6)	<ul style="list-style-type: none"> • Workshop Participants • Consultants
<i>10:30 -11:00 Health break</i>		
11:00 – 11:45	Plenary Session on SWOT and Stakeholder Analysis (Module 6)	<ul style="list-style-type: none"> • Workshop Participants • Consultants
11:45 – 12:15	Group work on identification of Critical Success Factors (Module 7)	<ul style="list-style-type: none"> • Workshop Participants • Consultants
<i>12:15 – 1:00 Lunch break</i>		
12.15 – 1:00	Plenary Session on identification of Critical Success Factors (Module 7)	<ul style="list-style-type: none"> • Workshop Participants • Consultants
<i>1:00 – 2.00pm Lunch break</i>		
2:00 – 3.00 pm	Group Work on Laboratory Vision Statement, Mission Statement and Core values (Module 8)	<ul style="list-style-type: none"> • Consultants • Workshop Participants

3:00 – 4:00	Plenary Session on Laboratory Mandate, Vision Statement, Mission Statement and Core Values (Module 8)	<ul style="list-style-type: none"> • Consultants • Workshop Participants
4:00 – 4 :15	<i>Health break</i>	
4:15 - 5:30 pm	Group Work on Goals, Objectives and Strategies (Module 8)	<ul style="list-style-type: none"> • Workshop Participants • Consultants
DAY 3 :		
TIME	ACTIVITY	FACILITATOR
8.30 a.m. – 8.45 a.m.	Recap of Previous Day Discussions	Consultants
8.45 – 10:30 am	Plenary Session on Goals, Objectives and Strategies (Module 8)	<ul style="list-style-type: none"> • Workshop Participants • Consultants
10:30-11 :00	<i>Health break</i>	
1:00 – 12:00	Group Work on Operations Plan (Module 9)	<ul style="list-style-type: none"> • Workshop Participants • Consultants
12 :00 – 1:00pm	Plenary Session on Operations Plan (Module 9)	<ul style="list-style-type: none"> • Workshop Participants • Consultants
1:00 – 2.00pm	<i>Lunch break</i>	
2:00 – 3:00	Group Work on Marketing Plan (Module 10)	<ul style="list-style-type: none"> • Workshop Participants • Consultants
3:00 – 4:00	Plenary Session on Marketing Plan (Module 10)	<ul style="list-style-type: none"> • Workshop Participants • Consultants
4:00 – 4:15	<i>Health Break</i>	
4:15 – 5:30	Group Work on Human Resource Plan (Module 11)	<ul style="list-style-type: none"> • Workshop Participants • Consultants
DAY 4 :		
TIME	ACTIVITY	FACILITATOR
8.30 a.m. – 8.45 a.m.	Recap of Previous Day Discussions	Consultants
8 :45 – 9 :45	Plenary Session on Human Resource Plan (Module 11)	<ul style="list-style-type: none"> • Workshop Participants • Consultants
9 :45 – 10 :45	Group Work on Costing, Pricing and Break-even Analysis and Financial Plan (Module 12 and 13)	<ul style="list-style-type: none"> • Workshop Participants • Consultants
10 :45 – 11:00	<i>Health Break</i>	
11 :00 – 12 :00	Plenary Session Costing, Pricing and Break-even Analysis and Financial Plan (Module 12 and 13)	<ul style="list-style-type: none"> • Workshop Participants • Consultants
12 :00 – 1:00 pm	Risks & Risk Management (Module 14)	<ul style="list-style-type: none"> • Consultants
1:00 – 2.00pm	<i>Lunch break</i>	
2.00 – 3.30	Group Work on Implementation (Action Plan) Matrix (Module 15)	<ul style="list-style-type: none"> • Workshop Participants • Consultants
3.30 – 5:00	Plenary Session on Implementation (Action Plan) Matrix (Module 15)	<ul style="list-style-type: none"> • Workshop Participants • Consultants
5:00 –	<i>Health Break</i>	

DAY 5 :		
TIME	ACTIVITY	FACILITATOR
8.30 a.m. – 8.45 a.m.	Recap of Previous Day Discussions	Consultants
8.45 - 10.00 am	Monitoring & Evaluation (Module 16)	Consultants
10 :00 – 10 : 30	<i>Health Break</i>	
10 :30 – 1:00 pm	<ul style="list-style-type: none"> • Workshop Evaluation • Presentation of Certificates • Workshop Closure 	<ul style="list-style-type: none"> • Participants • Consultants • The Hub
1:00 – 2 :00pm	<i>Lunch</i>	
2:00 -	FREE	

ANNEX 19: TRAINING EVALUATION FORM

WORKSHOP EVALUATION ON LABORATORY BUSINESS PLANNING HELD FROM MARCH 19 – 23, 2018

VENUE: JACARANDA HOTEL, NAIROBI, KENYA

Instructions:

Using a scale of 1=strongly disagree, 2=disagree, 3=neutral, 4=Agree, 5=strongly agree. Please indicate your degree of agreement or disagreement with each of these statements by ticking (✓) the appropriate box. There are no right or wrong answers. Please note that your responses will be treated confidentially.

S/No	Statement Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	The objectives of the training were clearly defined					
2	Participation and interaction were encouraged					
3	The topics covered were relevant to me					
4	The content was well organized and easy to follow					
5	The materials distributed were helpful					
6	This training experience will be useful in assisting others to develop a business plan					
7	The trainer was knowledgeable about the training					
8	The trainer was well prepared					
9	The trainer had the ability to explain and illustrate concepts					
10	The training objectives were met					
11	The trainer was able to adequately respond to all questions					
12	The training materials were useful					
13	The time allocated for the training was sufficient					
14	Overall, the objectives of the Workshop were achieved					

15. What did you like most about this training?

16. What do you think can be improved with regard to?

(a) Structure of the Training Program:

(b) Format of the Training Program:

(c) Training Materials:

17. How do you rate the training venue in terms of:

Attribute	Very Good (4)	Good (3)	Fair (2)	Poor (1)
Training Room				
Meals				
Quality of Service Delivery				
General Environment (Ambience)				
Other (Specify)				
Other (Specify)				

18. Please give us suggestions on how we can improve on our training program and delivery system.

Bio-data

Your name (optional) _____

Your position _____

Your contact: Phone _____ Email: _____

Name of your Country _____

The type of your Laboratory (e.g food safety) _____

Thank you very much for your feedback