BUSINESS DEVELOPMENT SERVICES
A PRACTICAL GUIDE FOR ENERGY ENTREPRENEURS

Solar phone multi-charger

A Baking Cakes in an Improved Baking Oven in Rukwa Region, Tanzania

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VISION
To be the leading social enterprise organization facilitating majority access to sustainable energy technologies and services

MISSION
To facilitate increased access to sustainable energy technologies and services in Tanzania, while enhancing financial sustainability in partnerships with communities, entrepreneurs, and other stakeholders for environmental conservation and poverty reduction

Entrepreneurs prepares cakes for selling

Half orange kiln for liner production

Drying vegetables using solar dryers

Improved charcoal stoves in a selling centre

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BACKGROUND OF TATEDO BDS MANUAL

TaTEDO is an organisation developing and offering sustainable rural energy applications. These applications vary from solar panels to simple efficient cooking stoves. The aim is to decrease the energy costs in small rural environments and to decrease the CO_2 exhaust.

TaTEDO works together with entrepreneurs who start their business based on the energy products developed and/or promoted by TaTEDO. These are rural energy entrepreneurs. TaTEDO also works with institutions and entrepreneurs who use the applications for their business purposes such as schools (solar lighting in class for example) and bakeries (efficient ovens).

TaTEDO offers technical training of modern energy technologies and services and integrates business development services into its activities. TaTEDO trained Business Development Officers (BDOs) to provide this service to rural energy entrepreneurs.

BDS manual provide practical guidance to modern energy entrepreneurs on how to conduct successful business within their environment. The tool kit provides relevant materials related to skills needed to be a successful entrepreneur hence it develop entrepreneurs business skills.

This practical guide has been adapted from the work of Triodos Facet on TaTEDO BDS tool kit.

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1 ENTREPRENEUR AND BUSINESS

1.1 ENTREPRENEURSHIP CONCEPT

Entrepreneurship is the capacity and willingness to undertake conception, organization, and management of a productive venture with all attendant risks, while seeking profit as a reward. Entrepreneurial spirit is characterized by innovation and risk-taking, and an essential component of a nation's ability to succeed in an ever changing and more competitive global marketplace. An entrepreneur is the one who undertakes innovations, finance and business acumen in an effort to transform innovations into economic goods. This may result in new organizations or may be part of revitalizing mature organizations in response to a perceived opportunity

An economic system in which goods and services are exchanged for one another or money, on the basis of their perceived worth. Every business requires some form of investment and a sufficient number of customers to whom its output can be sold at profit on a consistent basis.

TaTEDO promote modern energy technologies and services. From the following technologies one can identify business opportunities and start a profitable business.

S/n.	Technology/services
1	Cladding fabrication
2	Improved firewood stoves(For Institution and household)
3	Improved charcoal stoves
4	Baking Oven (for cake, bread etc)
5	Solar PV installations
6	Energy Services Platform (ESP)
7	Improved Basic Earth mound charcoal Kiln
8	Solar drying (Fruits and vegetables)
9	Solar Multi charger
10	Liner fabrication
11	Barbeque oven
12	Sustainable Energy Enterprises Centre powered by Solar Pv (SEEC)
13	Biogas system installation
14	Solar light (firefly 12 mobile, power pack)
15	Sustainable charcoal production and marketing
16	Electricity generation (wind, hydro, thermal)
17	Liquid biofuel production and marketing

2 COMPETENCES

Each entrepreneur has very interesting and valuable information relating to his success in business. The following four case studies tried to indicate the personal characteristics we believe that would be most important in owning and operating a business.

ENTREPRENEUR A: John

(John has owned a small restaurant for three years.)

I started by working at a restaurant in another town. I waited on tables, cooked, did the purchasing and bookkeeping and picked up a basic understanding of the business. Later, I spent some time at two other restaurants in town learning about managing a restaurant. Most people think if they are good cooks they can open a restaurant. It's not that simple! You've got to know every area of the food business, such as purchasing, advertising, cooking, managing employees and customer relations. Young people come to me and say, "I want to learn about operating a restaurant from you so I can open my own." I tell them, "That's okay with me, I'll have you cook, bartend, wait on tables and clean up tables." They say, "You don't understand. I want to learn how to manage." Well, I believe that you've got to "feel the business" from the ground up before you can run it.

I enjoy the freedom of being in business. I like being my own boss. I have twelve employees, and it gives me a good feeling when they ask me for advice. It would be difficult for me to work for somebody else. But I might become an employee in the future. I'm only twenty-eight years old, and my career could take many turns. I hope that if I did have to work for someone else, I could pretty much do what I wanted. I like making decisions and being a leader.

ENTREPRENEUR B: Doris

(Doris owns a small pharmacy. She has had her business for six years.)
I feel that people wanting to start a business should set deadlines for when they want to start. In the meantime, they should find out as much as they can about profit, volume, pricing, cash flow, personnel, advertising and accounting. Having your own business doesn't take up any more time than working for a big company. When you work for a company, they feel your life is their life. You may as well be your own boss. Even though I may physically leave my business premises, I never mentally leave my business. I'm always thinking about it. If I don't make things happen in my business, nothing will happen. This is my business philosophy. Although I myself am in the minority, one of the biggest pleasures I get out of my business is giving other women good jobs. I guess another reason for owning the company is that my net worth has improved. My disposable income is less, because I put most of my money back into the business because I want it to expand. The six other pharmacies in town are owned by men. I am the only woman who owns a pharmacy.

Improved Basic Earth mound Kiln

ENTREPRENEUR C: Mary

(Mary owns a store for gourmet cookware and kitchen utensils. She has been in business six months.)
In my mind, you're either an entrepreneur or you're not. If you are, you're always considering starting your own business. A young person who has talent in business and not too much capital is really better off these days with a business he can control.
If you put your money into a savings account, someone else controls it. I bought my business with several partners. I'm not an expert in kitchenware. I feel it doesn't matter what kind of business you go into as long as you have talent in marketing and can be imaginative and develop ideas and products. I've had plenty of experience as an advertising executive in an ad agency. Most entrepreneurs think of making something grow. We've already expanded to a larger store in the nearby shopping centre. I hope to have another store ready to open this summer. If you have a good concept, the way to make more money is to open new stores. I'm still an employee at the ad agency. I needed a steady source of income because the store is fairly new and my profits are low. Right now, I could not make enough money from the store to quit my job. This is probably not the best economic time to start a business. But I'm optimistic. Even during bad economic times, entrepreneurs can still make money.

ENTREPRENEUR D: Pat

(Pat Binamungu is one of four owners of a firm that owns a local radio station. Pat and her partners started the business ten years ago.)

The important thing is to get into a business you like and in an industry that you know. I'd worked at a radio for a number of years before we formed our business. When deciding on a business to enter, you need to know what the conditions are in the field. What is its future? Ten years ago we saw the potential for growth in radio. The time was right for me and my three partners to buy the radio station. Building a business takes much more imagination and creativity than most people think. Owning a business takes maturity and the ability to work effectively with others, including employees. We have a large number of people working for us now, and we've got to know how to deal with them. You need to have good help, including a dependable lawyer, accountant, insurance agent and banker. You need money. It's difficult to raise capital, especially on your terms. It took us three years to raise the money we needed to purchase the radio station. If you go into business with other people, either as a partnership or in a corporation, you've got to be certain you have common interest and goals. You need to know what each person does well and what skills they can contribute to the business. It helps to be friends. I don't accept the reasoning that you can't be friends with your partners. You can do it, if you can communicate well each other.

Solar PV system installation is a potential business

PERSONAL ENTREPRENEURIAL COMPETENCIES – PEC'S

Entrepreneurs (successful or unsuccessful) operate in the same environment however, successful entrepreneur possess certain personal entrepreneurial competencies (PECs). Furthermore, they characterized entrepreneurs across culture, country and continents. And have been divided into the following clusters. Basing on the business performance select the cluster which you represent.

2.1.1 Achievement Cluster

Opportunity Seeking and Initiative
Does things before asked or forced to by events
Acts to extend the business into new areas, products or services
Seizes unusual opportunities to start a new business, obtain financing,
equipment, land, work space or assistance

Fruits drying using solar dryer

Risk Taking
Deliberately calculates risks and evaluates alternatives
Takes action to reduce risks or control outcomes
Places self in situations involving a challenge or moderate risk

Demand for Efficiency and Quality
Finds ways to do things better, faster, or cheaper
Acts to do things that meet or exceed standards of excellence
Develops or uses procedures to ensure work is completed on time or that work meets agreed upon standards of quality

Persistence
Takes action in the face of a significant obstacle
Takes repeated actions or switches to an alternative strategy to meet a challenge or overcome an obstacle
Takes personal responsibility for the performance necessary to achieve goals and objectives

Commitment to the Work Contract
Makes a personal sacrifice or an extraordinary effort to complete a job
Pitches in with workers or in their place to get a job done
Strives to keep customers satisfied and places long term goodwill over short term gain

2.1.2 Planning Cluster

Information Seeking
Personally seeks information from clients, suppliers or competitors
Does personal research on how to provide a product or service
Consults experts for business or technical advice

Cakes ready to be packed for selling

Goal setting
Sets goals and objectives that are personally meaningful and challenging
Articulates clear and specific long range goals
Sets measurable short term objectives

Systematic Planning and Monitoring
Plans by breaking large tasks down into time-constrained sub-tasks
Revises plans in light of feedback on performance or changing circumstances
Keeps financial records and uses them to make business decisions

1.1.3 Power Cluster

Persuasion and Networking
Uses deliberate strategies to influence or persuade others
Uses key people as agents to accomplish own objectives
Acts to develop and maintain business contracts

Independence and self-confidence
Seeks autonomy from the rules or control of others
Sticks with own judgment in the face of opposition or early lack of success
Expresses confidence in own ability to complete a difficult task or meet a challenge

Having read and understand the above case studies and competencies that you possess you can start assess your level of competencies use the following tool.

Competence	Not at all				Very much
Opportunity Seeking and Initiative					
Risk Taking					
Demand for Efficiency and Quality					
Persistence					
Commitment to the Work Contract					
Information Seeking					
Goal setting					
Systematic Planning and Monitoring					
Persuasion and Networking					
Independence and self-confidence					

Solar dryer installation to potential entrepreneurs

An entrepreneur Mrs Kiwara explain to customers about a dried products of rosella

3 BUSINESS PLANNING & SWOT

3.1 THE BUSINESS PLAN

What is a business plan?
A business plan is a document prepared by somebody who intends to start a business or who is already in business. It gives a complete description of the business and its plans for a period of time (e.g. from one to five years).

Why do you need a business plan?
A business plan is like a map. A map shows a traveller:
- Where he is
- Where that traveller wants to go
- The distance and time that the traveller has to cover
- The obstacles on the route
- What is required to get there
- How to get there

If you are thinking of starting a business, you will also need some kind of a map, a business plan, to show you what you need to set up your business, what the new business hopes to achieve in a given period of time, the objectives of the business and the activities that the business must carry out to attain what it wants to achieve.

So Improved charcoal stove ready for selling

In short, a business plan is a statement, prepared by people intending to start a business, who should find themselves answers to the following questions:

- What is the present position of the person that wants to go into business?
- What does the business hope to achieve in the duration that the business plan is prepared for?
- What activities should be undertaken in order to achieve the set objectives?
- What does the business need in terms of resources, i.e. money, raw material, Labour, machinery etc. in order to achieve the given goal?

In other words, a business plan guides an entrepreneur in his business operations.

What is the business plan used for?
A business plan has two uses. It can be used internally or externally in one's business.

a) Internal use of a business plan
This is when a business plan is used as a working document in the business to enable the owner to see how the business is progressing and to spot problems or opportunities as they arise.

When a business plan is used as a management tool in the business, it enables the entrepreneur to:
- plan in a good way for the growth of his/her business
- think of what type of changes might be needed in the business
- know how to control the business
- find out the resources needed for the business to achieve its plan. These resources will not only be financial but could also include:
- additional management
- skilled Labour
- production capacity

- product development needs
- marketing drives

b) External use of a business plan
When a business plan is used to get a loan from any lending institution, it has been used externally. Nowadays, any lending institution (bank) will need to see an entrepreneur's business plan to assist the bank in finding out the following:

- How much does the entrepreneur want to borrow?
- What does the entrepreneur want the money for?
- When will the entrepreneur be able to repay the borrowing?
- Will the entrepreneur be able to pay the interest?
- Can the business survive a setback in its plans?
- What security is available for the lending institution?

However, the business plan is not only used for borrowing money from banks but it can also be used as a means of planning and controlling a business internally.

Can you start a business without a business plan?
Though you can start a business without a business plan the risks of failing are high. It is therefore advisable to always prepare a business plan.

So Improved firewood stove and model of institutional stove displayed for selling

As stated, a business plan is like a map. If a traveler like David Livingstone started off his journey without a map, he would probably have got lost.
That is the same for you: if you are running a business without a plan you are likely to fail in running it properly.

In fact, because most small businesses do not start with a business plan, they are responsible for most of them not doing well. To be on a safe side, you should always start a business with a business plan.

What common problems do people face in preparing business plans?
Most problems arise when people thinking of starting a business set their objectives too high. It is for example very unrealistic for a traveller to think that he will walk from village A to village B, a distance of 400 Km, in one day.

Therefore, when you are starting a business and preparing the business plan, you need to be sincere to yourself about what you want to do. It is advisable to think small. It is also for the above reason that you need to conduct a detailed market research and keep your requirements in terms of money, raw materials to a reasonable limit you can afford.

How to prepare a business plan?
A business plan consists of a different number of elements. This however depends on the nature and position of a business or the type of business.

If you are starting up a business, your plan will usually have to show the following:

1. Background of the business
Some background information on your business. This includes:

- The name of the proposed business
- The type of products you intend to deal in, e.g. Making chairs and beds
- The date you intend to start operating your business, e.g. 1 september 2006
- Your name(s) as the owner(s) of the business, e.g. Marion and jack

- Your experience in running a business, e.g. 2 years experience as a carpenter.

2. Location
The location is the place where you intend to run your business. It should include some information such as:

- Are the premises owned or rented?
- Does the place have any water and/or electricity?
- Is the business located near the source of (raw) materials or near the customers or competitors?

Liner entrepreneur at his workshop

3. Product
Explain the type of product(s) your business will deal in.
Under this element you can explain whether your product needs government approval which is normally required if your business deals in baking products (cakes, bread etc.), processing foods and fruit (jams, wines etc.) as this may be harmful to consumers and users if they are not made properly.

4. Marketing plan
In a business plan a detailed report on the market is very important. To get this information you can do a market research and ask yourself the following questions:

- Are you sure that there will be people who will buy from you?
- Why will people buy from you? Is it because your product will be cheaper or is it not available locally, or is your product of better quality?
- How will you let people know about your product? Are you going to place posters at markets or are you going to visit people at their homes and introduce the product?
- How will you sell the product? Will you sell directly to the end users or will you sell through a middleman?
- Who will be your competitors and what are their products, prices etc.?
-

5. Production plan
Here you should clearly show that you fully understand the process of producing your product(s). Also make clear how much it will cost to produce/sell the products and what will be your pricing. In addition, you should indicate what capacity you intend to operate on (production forecast):

- how much do you think you can produce/sell in e.g. one month?

6. Management and organization
Here you have to write down how many people you will need to run your business. That is, you may be starting alone but as time goes on you will probably need assistance.
You should also give an estimate of how much you are going to pay yourself and your workers.

7. Supply of (raw) materials
Here you should write down:

- Where you will get your (raw) materials
- How much you will need
- What will be the costs

8. Plant and equipment
A plant is the place you are working from. Here you have to write down:

- What equipment you will use,
- What you will need for your plant (building, shelter, stand etc.)
- Where you will get the equipment etc. And how much it will cost.

9. Investment and finance plan
Here you need to give a summary of how much money you will need to start your business and where you intend to get it from:

- How much money do you need (= investment) and how do you intend to spend it (e.g. on tools, materials, building)
- How much of your own money are you going to put in your business (= owners investment)
- How much money do you need to borrow?

10. Cash flow forecast
Last but by no means the least you must prepare a cash flow forecast. That is, you should show for a period of e.g. 1 year:
- How much money you expect from sales in each month
- How you intend to spend the money, clearly stating the items on which the money is to be spent and the month at which it will take place
- How you are going to repay the loan(s), showing the loan and interest repayments in each month.




Different sustainable energy products and technologies to be used by entrepreneurs as a source of income generation

3.2 BUSINESS IDEA

For start up if you have identified the opportunity and you don't what to lose it, fill the following form in order to put together your business idea for implementation

Name of the business: ______________________________

Type of business:

❑ Manufacturer ❑ Service operator ❑ Retailer ❑ Wholesaler ❑ Other: ______________

The business is going to:	
The technical skills will be coming from:	
The customers will be:	
The business will satisfy the following needs of the customers:	
The business will sell in the following way:	
My personal motivation to retain this business idea:	

3.3 SWOT STRUCTURE FOR A SMALL BUSINESS

SWOT is a strategic method used in business to identify and understand their competition. By utilizing the SWOT technique, a business owner can understand their differential advantage and develop new goals and strategies based on this information. The acronym SWOT stands for Strengths, Weaknesses and Opportunities

The table shows how SWOT can be structured. Basing on this establish you own SWOT structure of your own SWOT.

Strengths Strengths are within the control of the entrepreneur and they occur at present! Strengths should be capitalized and harnessed to make weaknesses redundant. ✓ Technical expertise ✓ New improvements of product ✓ Good network with customers ✓ Managerial experience ✓ Distribution system ✓ Comparatively cheap price ✓ Packaging ✓ Superior technology ✓ Product features (utility, durability)	**Weaknesses** Weaknesses are within the control of the entrepreneur; they occur at present. They are “lack of...”, “missing...”, or weak points. As far as possible, weaknesses should be eliminated! ✓ No control over raw material ✓ Limited product life ✓ Poor design of product Weak selling effort ✓ Comparatively high price ✓ No technical expertise of owner Lack of promotion experience ✓ Technological obsolescence ✓ Inexperienced managers/owners ✓ Lack of working capital ✓ Low level of stocks in times of peak sales
Opportunities Opportunities are positive or favorable factors in the environment which the entrepreneur should make use of or which make his project idea potentially viable. They are, however, mostly beyond the control of the entrepreneur. They are different from strengths in the sense that strengths are positive internal factors of the business. ✓ Few and weak competitors ✓ Rising income of target market ✓ Growing demand ✓ Similar products making profit ✓ Technical assistance available ✓ Access to cheap raw material ✓ No such products in the market ✓ Scarcity of product in the local market ✓ Favorable government policy ✓ Favorable government programs ✓ Adequate training opportunities ✓ Low interest on loans	**Threats** Threats are negative or unfavorable external factors in the environment and normally beyond the control of the entrepreneur. They adversely affect the business, if not eliminated or overcome. Threats differ from weaknesses in as much as they are beyond the control of the entrepreneur. Both have a negative impact on the business. The purpose of analyzing threats is to look for ways of hedging against them, i.e., trying to avoid them or lessening their negative impact by making counterbalancing actions. ✓ Rising raw materials costs ✓ Government bureaucracy ✓ Raw materials shortages ✓ Natural disasters ✓ Graft and corruption Changing government regulations ✓ Too much competition ✓ Restive Labour force ✓ Piracy of skilled Labour ✓ Insufficient power ✓ Poor infrastructure ✓ Smuggling

3.4 WRITING THE BUSINESS PLAN

As an entrepreneur you need to prepare and write business plan of your business whether by yourself As an entrepreneur you need to prepare and write business plan of your business whether by yourself or by the help of consultant. The following samples can be used to help the entrepreneur to choose elements for the content of the business plan. This is not a standard format that is obligated to be used. It should only be used as guidance.

Examples of elements for an executive summary

This business plan is a projection for the period

from ____ / ____ / 20____ till ____ / ____ / 20____

Name of the business: ____________________

Contact address: ____________________

Type of business:

- ❑ **Manufacturer of the following product(s):**
- ❑ **Service operator to provide the following service(s):**
- ❑ **Retailer running the following type of shop:**
- ❑ **Wholesaler running the following wholesale business:**
- ❑ **Other (specify), running the following business:**

____

____

____

Customers: ____________________

____

Staff: ____________________

____

Telephone: ____________________

Legal form : ____________________

Owners: ____________________

____

____

____

- *Qualifications and experience in attached CV's*

Sources of start-up capital:	**Amount:**

3.5 SAMPLE OF BUSINESS PLAN FORMAT

Mini-Business Plan
EXECUTIVE SUMMARY

1. Brief Description of the Mini-Business

2. Brief Profile of the Entrepreneurs

Key financial figures (planned investments, sales forecast, costs and expected profit)

MARKETING PLAN

1.1 Description of the Product/service

1.2 Comparison of the Product/service with its Competitors

Competitive Analysis of Product

Features[1]	Proposed Business	Competitor 1	Competitor 2	Competitor 3
Product Quality Price Delivery Lead time Multiple Use Taste				

1-Outstanding 2-Very Satisfactory 3-Good 4-Fair 5-Poor

1 Adjust the features to match with your product/service.

1.3 Location

1.4 Market Area

<List of market areas and size of market>

1.5 Main Customers

<List of major customers and their requirements>

1.6 Total Demand

Table 1.6 Projected Demand

Months (or weeks)	Quantity	Amount

1.7 Selling Price

Table 1.7 Comparisons of Competitors' Selling Prices

Project's Product(s)	Project's Selling Price	Prices of Competitors			Competitors' Average Price
		Competitor 1	Competitor 2	Competitor 3	

1.8 Sales Forecast

Table 1.9 Projected Sales by Months or weeks, Sales Volume and Amount

Months (or weeks)	Sales Volume (units)	Sales Amount (LC)

1.9 Promotional Measures

1.10 Marketing Strategy

1.11 Marketing Budget

Production PLAN

2.1 Production Process

2.2 Fixed Assets

Table 2.2-A List of Machinery, Number, Specifications and Purpose

Machines, Tools and Fixtures	Number	Suppliers	Price

2.3 Projected Production Volume by Month or week

Months (or weeks)	Volume

2.4 Terms and Conditions of Purchase of Equipment

2.5 Raw Materials Needed

2.6 Cost of Raw Materials

Table 2.6 List of Raw Materials, Sources and Price

Type of Materials	Suppliers	Unit Price

2.7 Labour

2.8 Cost of Labour

2.9 Production Cost

3.6 PLANNING ACTIVITIES

Plan of activities tries to link what you have planned and what has been achieved in a specified period of time

Activities		Timetable (In Weeks)																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1.	Developing Business Idea																		
2.	Preparing the Business Plan																		
3.	Applying/ Approval of Loan																		
4.	Contacting Equipment Suppliers																		
5.	Setting up location																		
6.	Hiring Labour																		
7.	Installing the Equipment																		
8.	Purchasing Raw Materials																		
9.	Production																		
10.	Sales																		
11.	Report on Results																		

An entrepreneur selling products using electricity supplied by energy services platform

Solar dryer can be used to dry different products for income generation

4 FINANCIAL MANAGEMENT

4.1 BOOK OR RECORD KEEPING

→ Keeping all the written information of your business, especially all financial written information such as invoices, bills, offers, receipt-copies, etc.

Why do you have to keep records?
→ to enable you to draw conclusions and help you know whether you are doing well in your business or not.

You need to keep enough records to help you know the following:
- How much profit/loss is the business making?
- How much worth is your business (all money your business has)?
- What costs are you making?
- How much do customers owe you? (debtors)
- How much does your business owe the suppliers? (creditors)
- How many surplus funds does the business have for expansion or improving? E.g. if there is enough money o buy new tools, construct or maintain your building etc.

You need records also to help you make good business decisions. For example the financial statement will show what your business has been doing in the past.

What types of records are used ?
There are many types of books used to keep records, known as subsidiary books. They differ from one business to the other. However, there are some books which are commonly used in all types of businesses.

REMEMBER:
Before choosing the types of records to be used you should find out which information you need for running the business. The records you prepare must be relevant to the operations of your businesses.

The following sets of books may be necessary for recording the information of your business:
- Order book
- Purchase book
- Cash book
- Sales book
- Debtors book
- Creditors book

However, small rural businesses have a harder time to keep all these books as they do not have enough time to do all required paper work. It is therefore useful to select most needed books to help them take wise business decisions. Such books may include purchase book, sales book and cash book.

4.2 CASH FLOW MANAGEMENT

"Cash is the lifeblood of the enterprise'

Every enterprise must have enough cash to meet its day-to-day commitments, to be able to pay for raw materials, wages and expenses. This is known as *liquidity*. Good marketing prospects or a full order book are useless without the cash to produce the goods or provide the services. A frequent reason why firms fail is a shortage of cash. This is why cash is known as "the lifeblood of the business". It is therefore very important to plan the needs of cash well in advance in a so-called *cash flow projection*. Making a cash flow projection is a vital part of the planning and control of a business. It helps to identify future cash needs and surpluses and thus helps to ensure the best use of normally scarce cash resources.

How do cash flow problems become 'visible' and what can be the consequences?
Delayed payment to creditors → stop supply.
Delayed payment of wages → unrest among workers, looking for other jobs.
Delayed tax payments → stop the business.
Default on payment of interest → penalties and eventually foreclosure on loans.

Possible causes of cash flow problems are the following:

- Price increase of raw materials.
- Growth in business expenses.
- Delay in payment from buyers, which could even lead to bad debts or default.
- More investment in capital equipment needed.
- Sales decline.
- Rapid sales expansion.

Cash flow (or liquidity) projection

A cash flow or liquidity projection shows all anticipated receipts when they are actually expected to be received and all payments when they are planned to be made. These cash receipts and paid expenses should not be confused with sales and costs. Cash flow projections are often done on a monthly basis but may be done at other intervals depending on the type and size of business. It shows when cash comes in and when cash goes out. In order to project a cash flow, you need to determine all anticipated cash *receipts* and *payments*.

How does a cash flow/liquidity projection help in managing the business?

It shows the cash surplus or deficit after accounting for all anticipated cash receipts and payments.
It enables the best use of cash resources of the business because it: 1) Indicates the level of borrowing required and the period for which it will be needed and 2) high-lights surplus funds that can be invested within or outside the enterprise and for repayment of loans
It acts as an *early warning system* by identifying an approaching cash shortage.

It is important to constantly monitor actual cash movements against the cash flow projection to identify changing circumstances at an early stage and be able to manage those changes. Cash flow projections say something about the viability of an enterprise in the short run, just like Profit and loss projections say something about the profitability of an enterprise in the long run.

Cash flow statement (cash flow realized)

It is very useful to compare a cash flow projection with the cash flow statement. An analysis of the differences between the projection and the realisation may give management insight into cash flow management; management will learn about the processes influencing liquidity in the enterprise. This learning process will result in an improved ability to plan the future cash flows in the enterprise.

Cash flow as is was realised in *the past period* can be calculated using the Income and Expenses Statement and the Balance Sheet: It is often done on longer intervals, depending on the availability and necessity of making the Balance Sheets and Income and Expenses Statements. Without these it is often easier to use the liquidity projection and use the same format and analyse the difference.

→ Model of a statement

Relation Profit And Loss Statement (profit calculation) and Cash Flow Statement

Profit and loss projections or statements say something about the profitability of a company in the long run, while cash flow projections or statement say something about its viability in the short run (If there is no more cash...).

Typical challenges faced by entrepreneurs with poor business records.

Keeping records of your business will help you to know your debtors and creditors.

It also helps you to understand: the costs of your business, the volume of your sales and how much profit you are making

Example of income and expenditure records for a small business

You have to keep records to know where the money in your business is coming from and going to and how much profit you are making. See the following example:

Sales			
Date	**Description**	**Amount**	**Total**
1-2	Sales	18,500	18,500
2-2	Sales	23,000	41,500
3-2	Sales	28,000	69,500

Expenses			
Date	**Description**	**Amount**	**Total**
1-2	Labour	2000	2000
1-2	Chicken feed	4,500	6,500
2-2	Chicken feed	40,000	46,500
2-2	labour	2000	48,500
3-2	Rent and fees	6000	54,500
3-2	labour	2000	56,500
3-2	Purchase Feeders	8,000	64,500

Calculate profit: Sales - Expenses
= 69,500 - 64,500
= 5,000

4.3 PROFIT CALCULATION

Most businesses exist to make profits. Profit is made if income from operations exceeds the costs during a certain time period. These profits can be paid to the owners (e.g. dividends to the shareholders) or, more important, they provide the business with funds for further investments and are therefore vital for the development of the enterprise. This is how a typical income statement looks like:

Variable costs	Costs that vary with the production volume: Cost of Goods Sold and Direct Labour Costs
Fixed costs	Costs which are independent from the production volume/variations such as indirect labour and salary costs, office expenses and depreciation.
Gross margin	Direct result of sales revenues minus variable costs
Gross profit	Result of the gross margin minus the fixed costs minus interest paid also called Earnings Before Interest and Tax (EBIT)
Net profit	Result of the gross profit minus the profit tax also called Earnings After Tax (EAT).
Depreciation	The cost of using capital equipment for generating income through production and sales. Depreciation is a calculated and allocated cost but is not a paid-out expense so it does not influence the cash situation of the enterprise. In principle the total depreciation value should be sufficient to replace the assets after it's technical or economical life. Depreciation can be calculated in several ways depending on one's preference and (tax) regulations but should be as close as possible to reality. A fixed percentage of the purchase price A fixed percentage of the book value Sum of year digits

Many models for the income and expenses account exist, depending on the type of business and the accounting principles used. In particular the valuation of assets and thus depreciation costs may differ with the accounting principles used. However, the national tax department normally provides guidelines limiting the scope for enterprises to 'play' with the figures and show lower profits.

4.4 SEPARATING FAMILY/FRIENDS AND BUSINESS

An entrepreneur has a dual personality:
S/he can give his private money to a friend, but he cannot give away money of the enterprise.
Takes care of the family as well as the family.
Both the business and family depends on him or her.

How can rural energy entrepreneur separate business and family?
- Cooperatives
- Association formation
- Making contracts with family members working in their businesses
- Giving legal status or registering their businesses

4.5 STOCK CONTROL

Generally, any business keeps goods and materials in stock.

Why should you keep stock?
If you have your goods and materials in stock, then you can always satisfy your customers' needs. Also, when the supply of goods and materials is very irregular and uncertain, then it's good to keep a large stock so that you don't run out of materials.
You must avoid running out of stock because then you must say 'no' to customers. They may go to competitors and may not come back to you again.

Another good reason to keep stock is because it is way of storing your cash. Especially when prices of products go up all the time (inflation), it is better to invest your money in goods and materials and keep it in stock. In that way your money will keep its value!

Stock control means:
- Keeping a check on your stock of goods, materials and parts.

You have to control your stock:
- To make sure that you don't run out of stock.
- To make sure that you don't keep too much stock of products that are not selling well.
- To make sure that the goods and materials are protected from all kind of hazards.

If you keep stock you have to make sure that the goods and materials do not get lost or spoiled. They should be protected against:
- Waste: Certain goods can get rotten if you don't sell them within a short period (e.g. meat, milk, bread).
- Deterioration: Certain goods deteriorate in quality if they are not sold within a certain period of time (e.g. medicine, tinned goods).
- Fire: Certain goods are dangerous to store long and unprotected (e.g. petrol, kerosene).
- Fashion changes: Certain goods, esp. clothing, lose their appeal because other styles come into fashion.
- Damages: While in stock, goods can be damaged or made unappealing because they for example get dirty, break etc.
- Theft: Goods can be stolen if they are not secured against theft by customers, employees or other people.
- Drawing loss: Sometimes the business owner will take goods and materials for personal use. These items must be recorded!

Rules of stock control
Check your stocks regularly.
How often you have to check your stocks depends on your type of business, how fast your stocks move and how much stock you keep.

Take note of goods and materials which are selling fast and those which are selling slowly.
If you know the speed at which your goods are sold, you will also know how much you have to keep in stock.

Keep your stocks well set out so that they are easy to see and easy to count.
If your stocks are arranged in a proper way it will attract customers. The customer does not need to search for the item and the employee can easily see whether the item is available. Also good stock arrangement will make it easier to count your stock. If you have a large number of different stock items, you should set them out in separate groups.
E.g. Pots together, plates together, shoes together, dresses together etc.

Protect your stocks against damages, theft, fire etc. so that they don't get spoiled.

Stock records
To be able to control your stock, you have to keep some basic records. These records will assist you to know the total value of the goods and materials that you have in stock (remember that stock is also money!). It

will also assist you to know the number of units you have in stock of each item, so that you don't run out of stock.

The best method for stock records is to record the value of all your stock at selling price. It is easier to use selling prices since they are often marked on the goods and they are used when sales are recorded and when stock is taken.

There are two basic stock records:

- Stock control book
- Stock cards

1. Stock control book
The easiest way to record your stock is to use the stock control book as shown below:

EXAMPLE:

Month: June

Date	Details	Stock in	Stock out	Balance stock
1 June	Opening stock			200,000
2 June	Sales		20,000	180,000
3 June	Sales		25,000	155,000
4 June	Sales		18,000	137,000
5 June	Purchase in DeS	120,000		257,000

In the stock control book you record the value of the materials and goods that have physically gone out of stock (cash sales, credit sales whereby the item has been collected) or have come in stock (purchase of goods and materials).The stock control book shows you the total value of your stocks.

2. Stock cards
The stock cards show you the number of units that you have in stock form each item.
Under this system you have a separate card for each of the different types of items that you have in stock.
Stock cards can be used by manufacturers as well as service operators or traders.

EXAMPLE:

STOCK CARD

Article: Firefly 12 Mobile
Cost price: Tsh 200
Selling price: Tsh 350
Re-order level: 100

Date	Details	Stock in	Stock out	Balance
1 June	Purchased	200		200
3 June	Sold		10	190
4 June	Sold		13	177
8 June	Sold		30	147
11 June	Sold		20	127
16 June	Sold		27	100 (!)

Each time you buy or sell Firefly 12 Mobile you enter it on the card. The balance column shows you how many batteries are still in stock.
It is important to re-order in time so that you don't run out of stock. Don't wait with purchasing new items until all your items have finished!

To find out when you have to re-order e.g. new Firefly 12 Mobile, you must know:
How many batteries you sell every week or every month
How long it takes you to get new Firefly 12 Mobile

On average you sell 40 Firefly 12 Mobile in a week. It takes |you one week to get new Firefly 12 Mobile. Therefore, you |should re-order when your stock is at 100. This gives you 40 for the week's delay and 60 in case you can't |get the new firefly 12 mobile in time or in case you sell more than 40 in the next week. 100 is your re-order level.

Stock taking
The purpose of stock taking is to know the total number of unit you have in stock of each item at a certain date. By means of stock taking you can compare the stock that is physically in your business, with your stock records. It will also show which items are slow selling and which fast selling. In addition, it shows the physical condition of your stock (did it get dirty, are items rotten etc.).

How often you have to do a physical stock taking depends on the type of business and the speed that your items are being sold. It is advisable to do it regularly (e.g. the last day of each month).

For stock taking you can use a stock taking form:

EXAMPLE:

Date of stock taking: 31 May

	Begin stock (1)	Purchases since last stocktaking (2)	Total sales (3)	Total stock	End stock (4)	Physical remarks
Chitenge	20	30	40	10	10	
Trousers	15	10	10	15	14	stained
Shoes	20	15	20	15	15	
Combs	100	150	80	170	170	
Lotion	30	20	25	25	22	damaged
Uniforms	30	15	10	35	35	

All items are counted in the shop. Be sure that you have not double counted or missed some items when counting.

The end stock counted should be:

Begin stock + Purchases - Sales = End stock
(column 1) (column 2) (col.3) (column 4)

So, column 4 (end stock) should give the same number of items as you have physically counted in your shop. If they differ then count again!

If the number still differs then try to find out what could cause the difference: waste?, damages?, theft?, the owner used it?

4.6 CASH BOOK

All the day to day transactions involving cash repayments and receipts are recorded in this book. Information in the cash book includes:

- Cash in hand
- Cash purchases
- Daily expenses
- Cash receipts

EXAMPLE:

Month: April

Date	Details	Cash in	Cash out	Balance
1 April	Deposit for 1 cupboard	10,000		10,000
3 April	Deposit for 2 dining tables	20,000		30,000
4 April	Bought material		15,000	15,000
8 April	Sold 2 dining tables	20,000		35,000

REMEMBER, for balancing:
When you take money out = SUBTRACT
When money comes in = ADD

Group of women entrepreneur learn how to bake cake

Cake and bread ready to be packed for selling to the end user

5 COSTING, BREAK-EVEN ANALYSIS AND PRICING

5.1 COSTING

What are costs?
- the money you give out to produce your items
- all the expenses you make in running your business

What is costing?
Costing = the way you calculate how much is spent on producing and selling a product or a service.

You need to know in detail what it costs to make a product, sell a product or provide a service. Many small or large businesses get into trouble because they do not know their costs.

If you know your costs, then you are able to:
- set your selling prices so that you can attract customers,
- know if you are making a profit or a loss, (profit = money in - money out)
- find out which items are most costly in running your business so that you can reduce the costs,
- see what effect improvements in your business have on your costs.

In most cases the information you need for your costing comes from your bookkeeping system, from books such as:
- Purchase book
- Sales book
- Cashbook etc.

To gather proper information, all these books should be in good order before you can do your costing.

You can only cost your products when you know the total costs of running your business during one year or one month. You should also know the type of costs which make up these total costs.

Types of costs
In any business there are two types of costs:

1. Direct costs
2. Indirect costs

The formula for the costs in a business is:

Total costs = Direct costs + Indirect costs

1. Direct costs

Direct costs are the costs which form part of the final product or service which you produce. These costs are direct related to the production of an item. The direct costs are:

DIRECT COSTS =
The costs that are direct related to the product or service that you produce

The direct costs can also be divided into two, namely:
Direct material costs: these are costs of materials which are used to produce a product

Direct Labour costs: these are costs of Labour paid to the workers for the time they spend on making the product

Because the direct costs are direct related to a product or service, they also change according to the number of products/services you make. E.g. to make 1 pair of trousers you need 2 meters of cloth material, for 2 pair of trousers you need 4 meters.

2. Indirect costs
Indirect costs are all the other costs which you make in running your business and which are not direct related to the production of the items.

INDIRECT COSTS =
The costs that are made in running the business but which have no direct connection to the final product.

The indirect costs are for example:
- Rent of building
- Depreciation on tools, building, machines, equipment
- Maintenance and repair of tools, machines etc.
- Water and electricity
- Office costs such as stationery, postage, telephone
- Transport
- Salaries paid to everyone who is not directly involved in making the product
- Selling costs (e.g. posters, advertisements)
- Financial costs such as interest on loans

The total indirect costs do not change with the level of production! E.g. the rent of your building will be the same, no matter is you make 1 pair of trousers or 5 pair of trousers in a day. But by increasing the production, the indirect costs per item will be less!

This basic break down of costs into direct and indirect costs applies to all types of businesses whether they are in retailing, wholesaling, manufacturing or providing services (e.g. garage, restaurant). The only difference is that in some businesses some costs are bigger than in other businesses (e.g. in service businesses the raw material costs will be very small)

Examples of costs in different types of businesses:

Type of business	Direct costs	Indirect costs
Manufacturing (e.g. carpentry)	(raw) Materials Labour (wages)	Transport Depreciation Maintenance & repair Stationery Rent
Trading (e.g. grocery shop)	Amounts paid for the goods Transport costs	Rent Stationery Water & electricity Depreciation (building) Maintenance (building)
Service business (restaurant, barber shop)	Food Labour	Rent of building Depreciation Transport Water & electricity Stationery

Costing for a manufacturer or service provider

As in any other business, a manufacturer (e.g. carpenter) or a service operator (e.g. garage) has two different costs:

- Direct costs (material costs, Labour costs)
- Indirect costs (rent, stationery etc.)

1. CALCULATION OF DIRECT COSTS

In order to calculate the direct costs for a manufacturing business or service business, we will split it in:

A. Calculation of the material costs
B. Calculation of the Labour costs

A. How to calculate the direct material costs?

Direct material costs per product = Quantity of material needed for producing the product X Price for the material

Step 1: Calculate the quantity of material needed

Step 2: Find out the price of the material

Step 3: Now calculate the direct material costs for one product

Example:

Amount of material	Price of material	Total
6 mtr timber ¼ litre glue ¼ kg nails	Tsh 800/mtr Tsh 1,000/ltr Tsh 2,000/kg	Tsh 4,800 250 500
Total direct material costs		Tsh 5,550

B. How to calculate the direct Labour costs?

Direct Labour costs per product = Labour rate per day (or hour) X No. of Labour days/hours needed to produce the product

To calculate the direct Labour costs per product you should take the following steps:

Step 1: Calculate the Labour costs per month

To know the Labour costs per month you must find out your costs of living in one month. The best way to find out is to write down what your family expenses are in one month.

Example:

The costs of living in one month:

Maize meal	Tsh. 9,600
Cooking oil	4,000
Sugar	500
Soap	400
Relish	2,000
Clothes	3,500
Total	20,000

Step 2: Calculate the number of days you work in one month.

How many days do you usually work in a month? If it differs per month then take an average.

Example:

5 days per week x 4 weeks = 20 Labour days per month

Step 3: Calculate the Labour costs per day.

Labour costs per day = Labour rate per month No. of Labour days per month

Example:				
Labour rate per month		Tsh 20,000		
---	=	----------------	=	Tsh. 1,000 per Labour day
No. of Labour days per month		20 days		

Step 4: Calculate the number of Labour days you need for producing the item.

Example:

It takes you 4 days to produce one dining table.

Step 5: Calculate the direct Labour costs for one item.

Direct Labour costs per item = Labour costs per day x No. of Labour days

Example:
Direct Labour costs for one dining table =

Tsh. 1,000 x 4 Labour days = Tsh. 4,000

From the above information you have found the direct costs of a dining table. This means that you have not yet found the total costs of the table!

2. INDIRECT COSTS

In the previous lesson we have learned that indirect costs are all costs you make in running your business which are not direct connected to the final product.
Indirect costs are also called fixed costs because they do not change according to the level of production. They remain the same, no matter the production increases or decreases.

A. How to calculate the indirect costs?

Indirect cost per product = Indirect costs per Labour day/hour x No. of Labour days needed to produce that product

To calculate the indirect costs for one product, you should take the following steps:[1]

Step 1: Calculate the total indirect costs per month

Find out what type of indirect costs you have in your business. For example if you don't have water and

1 The method explained here is especially useful for businesses that produce different types of products.

electricity, you don't include it as an indirect cost.
Only include the costs that you really make in your business!

The information that you need to calculate the indirect costs comes from your bookkeeping. Find out from your records what costs you make in one month for e.g.:

- Rent of the building
- Maintenance and repair of tools, building
- Depreciation of tools, building etc.
- Transport
- Stationery
- Salaries
- Water and electricity
- Interest on loan
- Selling costs

Example:

The total indirect costs per month in my business:

Transport	Tsh, 4,000
Maintenance & repair	500
Stationery	300
Rent of building	5,000
Water & electricity	500
Interest on loan	3,000
Depreciation of tools	4,700
Salaries	2,000
Total:	20,000

Step 2: Calculate the number of days/hours you work in one month

If the number of labourdays/hours differs per month, then take an average.

Example:
Total no. of working days in a month:
5 days per week x 4 weeks = 20 Labour days per month

Step 3: Calculate the indirect costs per day/hour

Indirect costs per day/hour:

Total indirect costs per month
No. of Labour days/hours per month

Example:
Indirect costs per Labour day =

Tsh. 20,000
----------------- = Tsh. 1,000
20 Labour days

Step 4: Calculate the number of Labour days/hours spent on making the product

E.g. It takes you 4 days to produce a dining table.

Step 5: Calculate the indirect costs per product

Indirect costs per item =

Indirect costs per Labour day/hour x No. of Labour days/hours per product

Example:

The indirect costs for one dining table =

Tsh. 1,000 x 4 Labour days = Tsh. 4,000

3. CALCULATION OF TOTAL COSTS

To calculate the total costs of a product you can use the following formula:

Total costs per product =

Direct material costs/product + direct Labour costs/product + indirect costs/product

Example:

Total costs for one dining table:

Direct material costs for one table =	Tsh. 5,550
+/+ Direct Labour costs for one table =	4,000
+/+ Indirect costs for one table =	4,000
	Tsh. 13,550

CCosting for a trader

As in any other business, a trader (e.g. shopkeeper, grocery stand, marketeer) has two different costs:

- Direct costs
- Indirect costs

The difference with e.g. a manufacturer lies in the type of direct costs and indirect costs a trader has and their proportion.

1. CALCULATION OF DIRECT COSTS

For a trader the main direct costs are the amount (s)he has to pay for purchasing the goods, this is the costs of goods bought.

In order to calculate the direct costs for one month, you should calculate the total amount you paid for the goods bought in that month.

Example:

Costs of goods bought:

20 chitenges at Tsh, 2,000 =	Tsh, 40,000
20 pair of shoes at Tsh, 1,000 =	20,000
10 bicycle tyres at Tsh, 2,000 =	20,000
	Tsh, 80,000

The difference between wages and salaries

When comparing the direct costs of manufacturers and traders, we can notice that the main difference lies in the Labour. We calculated Labour as a direct cost for manufacturers but not for traders. This is because of the difference between wages and salaries.

Wages: These are Labour costs that are direct related to producing a product/service. E.g. Labour for producing a table, Labour for repairing a vehicle. Hence, wages are direct costs.

Salaries: These are Labour costs that are indirect related to a product. E.g. office work, Labour from a trader etc. Salaries are indirect costs.

However, although wages and salaries differ in terms of being direct or indirect related to production, the calculation for the Labour costs remains the same (see under calculation indirect costs).

2. CALCULATION INDIRECT COSTS

Compared to the calculations of indirect costs for manufacturers, the main difference is that for a trading business you just calculate the total indirect costs per month. Later, in the lesson 'Pricing' it will be made clear how the indirect costs will be included in the selling price of each product.

To calculate the indirect costs per month, find out what type of indirect costs you have in your business. For example if you don't have water and electricity, then don't include it as an indirect cost. Only include the costs that you really make in your business!

The information that you need to calculate the indirect costs comes from your bookkeeping. Find out from your records what costs you make in one month for e.g.:

- rent of the building
- maintenance and repair of tools, building
- depreciation of tools, building etc.
- transport
- stationery
- salaries
- water and electricity
- interest on loan
- selling costs

Example:

Total indirect costs per month in my business:

Transport	Tsh. 4,000
Maintenance & repair	500
Stationery	300
Rent of building	5,000
Water & electricity	500
Interest on loan	3,000
Depreciation of tools	4,700
Salaries	2,000
	Tsh.20,000

Note: To calculate the salary level, you should find out the costs of living per month. The best way to find out is to write down your family expenses of last month.

Example:

The costs of living in one month:

Maize meal	Tsh. 9,600
Cooking oil	4,000
Sugar	500
Relish	2,000
Soap	400
Clothes	3,500
Total	20,000

3. CALCULATION OF TOTAL COSTS

Total costs per month =
Direct costs per month + indirect costs per month + indirect costs/product

Example:

Total costs per month:

Direct costs per month	=	Tsh. 80,000
+/+ Indirect costs per month	=	20,000
		Tsh. 100,000

CaCalculation of depreciation
We have seen that one of the indirect costs in a business is the depreciation of tools, shelter, building etc.
What is depreciation?

Take for example a carpentry workshop. In the workshop you use tools like a hammer, a saw, chisels, a plane etc. to produce your items. After some time these tools will be old and will need replacement. Also the building or shelter that is being used needs to be renewed after some time.

DEPRECIATION:

- is the money which you have put aside to be able to replace your equipment and other assets after some years.

To calculate the depreciation of your equipment you should take the following steps:

Step 1: Make a list of all the equipment that you have in possession

Example:
Tools that you have:
1 cross cut saw
1 chisel
1 sash clamp

Step 2: Calculate the current prices of the equipment

If you had to buy e.g. tools at this moment, what would be the purchase price?
Example:

1 cross cut saw	Tsh	20,000
1 chisel		12,000
1 sash clamp		50,000

Step 3: Calculate after how many years replacement of the equipment is needed.

Example:
Replacement needed after:

1 cross cut saw	5 years
1 chisel	2 years
1 sash clamp	10 years

Step 4: Calculate the depreciation per year.

That is:

$$\frac{\text{Purchase price of that equipment}}{\text{No. of years for replacement}}$$

Example:

Tool	Price	Replacement after	Depreciation per year
1 cross cut saw	20,000	5 yrs	4,000
1 chisel	12,000	2	6,000
1 sash clamp	50,000	10	5,000

Step 5: Calculate the depreciation per month.

That is:

$$\frac{\text{Depreciation per year}}{\text{12 months}}$$

Example:

Tsh 15,000/12 months = Tsh 1,250 per month

5.2 REDUCING COSTS

If you know the costs that you make in running your business then you can also find out if it is possible to reduce the costs.

Why should you reduce your costs?

- To make more profit
- To be able to lower your selling price so that more customers will buy from you and so that you can better compete with your competitors.

How can you reduce your costs?

You can reduce your costs by:

Cutting the costs of (raw) materials:
- Buy materials of good quality so that you have less material that cannot be used because of bad quality
- Buy materials which are not too expensive in relation to the quality
- Buy materials in big quantity so that you can get a discount from your supplier
- Try to store materials (e.g. timber, inputs) to avoid the costs of price increases (inflation)
- Try to cut down waste by cutting your materials in a good way
- Cut down spoiled work which must be thrown away or sold off cheaply

Cutting the Labour costs:
- Decrease the time needed to produce one item. Work faster and more efficient but not at the cost of good quality!
- Work at least 5 days full time in a week (= 20 days per month)

- Produce more items in a month so that the Labour costs per item will be less

Cutting the indirect costs:
- Lower the transport costs per item by transporting more items at the same time.
- Use your stationery (pens, paper etc.) efficiently.
- Be careful with your tools. Maintain them well to prevent them from damages.
- Reduce the loan amount outstanding so that you have to pay less interest.

5.3 BREAK EVEN ANALYSIS

The "break-even" point is the point at which total revenues equal total costs. At this point, a business begins to earn a profit.
Companies tend to look at the break-even point in terms of sales volume.
For example: "Business A will break even after selling 500 tables."
Companies also look at the break-even point in terms of time.
For example: "Business B will break even after 2 years."

No matter how companies refer to the break-even point, they always begin with the Break-Even formula:

$$\text{Break Even Point} = \frac{\text{Indirect costs}}{(\text{Price per Unit} - \text{Direct costs per Unit})}$$

A break even analysis depends on the following variables:
1. The indirect production costs for a product.
2. The direct production costs for a product.
3. The product's unit price.
4. The products expected unit sales [sometimes called projected sales.

On the surface, break-even analysis is a tool to calculate at which sales volume the direct and indirect costs of producing your product will be recovered. Another way to look at it is that the break-even point is the point at which your product stops costing you money to produce and sell, and starts to generate a profit for your business.

You can also use Break Even Analysis to solve managerial problems:
- setting price levels
- targeting optimal variable/ fixed cost combinations
- determining the financial attractiveness of different strategic options for your company

Definitions used in Break-Even Analysis:
- **Indirect (Fixed) Costs:**
  The sum of all costs required to produce the first unit of a product. This amount does not vary as production increases or decreases, until new capital expenditures are needed.

- **Direct (Variable) Costs:**
  Costs that vary directly with the production of one additional unit.

- **Expected Unit Sales:**
  Number of units of the product projected to be sold over a specific period of time.

- **Unit Price:**
  The amount of money charged to the customer for each unit of a product or service.

- **Total Costs:**
  The sum of the fixed cost and total variable cost for any given level of production.
  (Fixed Cost + Total Variable Cost)

- **Total Revenues:**
  The product of expected unit sales and unit price.
  (Expected Unit Sales * Unit Price)

- **Profit (or Loss):**
  The monetary gain (or loss) resulting from revenues after subtracting all associated costs.
  (Total Revenue - Total Costs)

- **Break Even point:**
  Number of units that must be sold in order to produce a profit of zero (but will recover all associated costs).
-
- **(Break Even = Fixed Cost / (Unit Price - Variable Unit Cost)**

5.4 COSTING EXERCISES

A: Costing for a manufacturer

- You manufacture leather jackets
- You make 10 jackets per month
- You work 20 days in a month.
- To make 1 jacket takes you 2 Labour days
- For the production of 1 jacket you need for material:
  - 2 meters of leather at K 1,000 per meter
  - Lining: K 500 per jacket
  - Buttons: K 200 per jacket
  - Strips: K 100 per jacket
  - Labels: TSH 200 per jacket
- You pay yourself for Labour TSH 1,000 per jacket
- Transport to sell and buy the jackets is TSH 8,000 per month
- Stationery costs are TSH 500 per month
- The depreciation for your sewing machine is TSH 2,000 per month
- For maintenance and repair you pay TSH 1,000 per month
- You rent your building for TSH 8,500 per month

Calculate:

a) Direct material costs per jacket
b) Labour costs per jacket
c) Indirect costs per jacket
d) Total costs per jacket

Case 1: Costing for a manufacturer
You own a small carpentry shop and you manufacture dining tables. You are supervising the production and marketing as well as the administration and procurement.

- You manufacture dining tables
- You make 4 tables per month
- To produce one table takes you 5 Labour days
- For 1 Labour day you pay Tsh 1,000
- For material you use:
  - Planks: 6 meters at TSH 1,000 per meter
  - Kapollos: 5 meters at TSH 800 per meter
  - Glue: 1/4 liter at TSH 4,000 per liter
  - Screws: 12 at TSH20 per screw
  - Nails: 1/8 kg at TSH 4,000 per kg
- Your own salary is TSH 20,000 per month
- You work 20 days in a month
- The value of your tools is TSH 120,000. The tools will last for 5 years. So, tools depreciation per month = TSH 2,000

- The depreciation of your shelter is TSH 1,000 per month
- You buy stationery for TSH 2,000 per month
- Transport costs for selling your items are TSH 5,000 per month
- You have a loan over which you pay TSH 10,000 interest per month

Calculate:

a) Direct material costs per dining table
b) Direct Labour costs per dining table
c) Indirect costs per dining table
d) Total costs per dining table

Costing for the small business

REMEMBER:

> **Total costs per product =**
> Direct material costs/product + direct Labour costs/product + indirect costs/product

Now look at the costs you make in your mini business and calculate for your products/services:

a) Direct material costs
b) Direct Labour costs
c) Indirect costs per month
d) Indirect costs for the products/services
e) Total costs for the products/services

Case 1: Costing for a manufacturer: Answers

a. Direct material costs per jacket:

Leather	TSH 2,000
Lining	500
Buttons	200
Strips	100
Labels	200
	TSH 3,000

b. Labour costs: TSH 1,000 per jacket

c. Indirect costs per month:

Transport	TSH 8,000
Stationery	500
Depreciation	2,000
Maintenance & repair	1,000
Rent of building	8,500
	TSH 20,000

Number of Labour days per month: 20 days

Indirect costs per Labour day = $\frac{\text{TSH } 20{,}000}{20}$ = Tsh 1,000

It takes you 2 days to produce 1 jacket. So, the indirect costs for 1 jacket:
Tsh 1,000 x 2 days = Tsh 2,000

5.5 PROFIT CALCULATION: BREAK-EVEN AND PRICING EXERCISES

Case 2: Break-even point for Mr Juma's Furniture workshop

Mr Juma's Furniture workshop has a Sales Turnover of 4,000 furniture units at Tshs. 1,000 in a year.

Tshs. 980,000 fixed costs are incurred in the same year, whereas the variable cost per unit amount to 650 per unit
Calculate the workshop's break even point sales (i) units and (ii) shillings

Case 3: Pricing for a trader

You have a grocery stand. This month you bought the following goods:

Groceries	Tsh.	100,000
Shoes		50,000

For transport you paid:

Goods:	Tsh.	5,000
Person:	Tsh.	5,000

You have the following costs in a month:

Rent of stand	Tsh.	2,000
Selling costs		20,000
Salaries		20,000
Stationery		3,000

You bought the shoes for Tsh. 2,000 each pair. Your profit % is 10%

Calculate the selling price for 1 pair of shoes.

Case1: Answers to break-even and pricing exercises

A. Break-even point for Mr Juma's Furniture workshop

Break-even in Units:

$$B.E.P = \frac{Fixed\ Cost}{Unit\ Price - Variable\ Unit\ Cost} = \frac{980{,}000}{1000 - 650} = 2{,}800\ Units$$

Break-even price in Shillings:

$$B.E.P = \frac{Fixed\ Cost + Variable\ Unit\ Cost * Quantity}{Quantity} = \frac{980{,}000 + 4{,}000 * 650}{4{,}000} = Tsh.\,895$$

B. Pricing for a trader

Direct costs for that month:

Total goods bought:	Tsh.	150,000
Transport	Tsh	5,000
		155,000

Indirect costs per month:

Transport	Tsh.	10,000
Transport person		5,000
Rent		2,000
Selling costs		20,000
Salaries		20,000
Stationery		3,000
	Tsh.	50,000

% for the indirect costs:

$\frac{50{,}000}{155{,}000} \times 100\ \% = 32\ \%$

Mark up % =

32 %	(indirectcosts)
10 %	(profit)
42 %	

Selling price for 1 pair of shoes:

Purchase price	Tsh. 2,500
Mark up % 42% x Tsh 2,500 =	Tsh. 1,100
Selling price = Tsh. 3,600	

5.6 PRICING

What is a price?

PRICE =

- the final cost of your product including a profit
- what you ask people to pay for your product

A Semi industrial solar dryer can be used by potential entrepreneurs

An entrepreneur prepares barbeque using improved barbeque oven

What is pricing?

PRICING:

- The way you find out how much you should charge a customer for your products
- The way you decide on the prices that you should charge for your products.

Why do you have to price your products?

Many small scale businesses do not know their cost price and selling price of their products. As a result, they always run out of business.

Therefore it is important to know that:

Cost price: the costs of making your product
Selling price: the price at which you sell your product after putting a profit on top of your cost price.

You have to price your products in order to know whether you are making a profit or a loss in your business.

What do you need to know when setting your prices?

In order to set prices, look at the following:

1. You need to know your costs of production.

That is, how much did you spend on making your product (e.g. raw materials, labour). Your prices should cover:
- The direct costs
- The indirect costs

If you know the costs, then you will be able to set a good price so that you make a profit and can compete with other producers/traders.

2. You need to decide on your profit mark up.
Which % do you want to put on top of the price as your profit? The money which comes from the sales should provide a reasonable profit.

3. You need to find out the prices that your competitors charge for the same or similar product.
This information comes from your market research.

4. You need to know what customers are prepared to pay for your product/service.
This information comes from your market research.

How can you know if your pricing is wrong?
You can sometimes tell when your pricing is wrong by checking on the following factors:

1. Prices may be too high if:
You do not reach your sales target
You lose some big orders
Sales of some of your products are low compared to other products
Stocks pile up
You receive complaints from customers

2. Prices may be too low if:
There are more orders than you can fill
You run out of stocks all the time
Sales are good but the overall profits are low

A Sustainable Energy Enterprise Centre (SEECE) can be owned by entrepreneur

A Baking Oven among the promising business for sustainable energy entrepreneurs

6 MARKETING AND MARKET ASSESSMENT

6.1 THE MARKETING MIX

Marketing is a is a set of activities performed by organizations, social process or entrepreneurs from the producer to the end user.

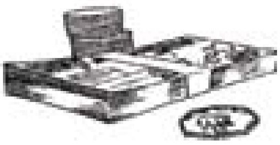
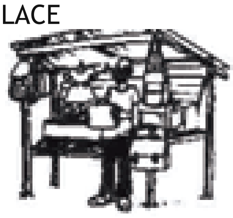
The process involve product planning, pricing, promotion, placing. All these need activities are mixing together to get customer accredited by the service offered. The process begins with identification of consumer need and determines what goods and services are to be developed

Improved charcoal stove displayed for selling at SEECO shop

Version 1

The item you are selling	Setting your price to make a profit
Deciding which item to sell Deciding which product will appeal to the customers Finding out if similar products are sold, how they are made, priced and what customers like or dislike about them Finding quality	Setting your price Margin of profit over costs Prices of competitor's products Special prices for quick sales Special prices to attract customers Deciding whether customer purchases on price or quality Price changes in different seasons of the year
Finding the best place to sell your product of finding the best way to distribute your product	**Creating ways to persuade customers to buy your product**
Who should sell your product Whether to use a retailer or sell directly Whether to use a middleman Getting your product to the market or customer Type of transport Cost of transport Co-operation with other business people Where to sell: at home, door to door, markets, shops, bus stops Methods of storage and costs	Display of the product Signs about pricing Signs of information about product benefit for the customer Manner of sales persons Cleanliness/dress of salesperson Things to attract customer Ways to advertise with signs, music, loudspeakers Location and condition of the business Demonstration of how to use the product Creating messages about the product Appealing look of shop or ways products are arranged Creating an image of the product in customer's mind

Version 2

PRODUCT 	A good product satisfies your customer's needs, keeping in mind: Quantity Quality Attractiveness Design Distinguish from competition Combination of goods Assortment
PRICE 	Setting your price to make a profit, keeping in mind: Cost of producing the product What are customers prepared to pay? What are your competitors' prices?
PLACE 	A good business location is easily accessible for customers, clean, safe, attractive, with opening on regular and convenient hours A good presentation of goods (display) Finding the best way to distribute your product
PROMOTION 	Promotion is all activities to attract customers to buy your product, for example: Visit potential clients Sign post Sales promotion Advertising Selling techniques Word of mouth

6.2 MARKET RESEARCH AND SEGMENTATION

Market segment	Identification of potential customers	Customer needs and preferences	Competitors analysis
1			
2			
3			
4			

6.3 PLANNING WORK SHEET FOR PRODUCT MARKET ASSESSMENT EXERCISE

The product market assessment tries to gather required information for each element of your specific product market or project idea in which you operate. To be precisely do to at least three products of your business.

Name of the product:

Effective Demand for the Product; how many people need it/can afford it/buy it?

Information Required	Possible Sources	Deadline

Information about Competitors/Other Suppliers; who is already offering the product

Information Required	Possible Sources	Deadline

Target Market or Buyers: Who do we intend to sell our product?

Information Required	Possible Sources	Deadline

Where are we going to sell our product or through whom?

Information Required	Possible Sources	Deadline

What kind of promotion do we need? (if any?)

Information Required	Possible Sources	Deadline

Pricing. What should be the price of our product?

Information Required	Possible Sources	Deadline

What costs can we expect? (raw materials, rent, transport, etc.?)

Information Required	Possible Sources	Deadline

7 BUSINESS NETWORKS, SUPPLIES & ASSOCIATIONS

7.1 NETWORKING

Entrepreneurs should be aware that it will be partly through their (social) networks that they will eventually be successful. The more developed their networks, the better chance they stand to succeed.

Informal *Network*
There are many different definitions of what an informal or personal network is. A number of definitions have provided by different authors. This limited list gives an impression of the different definitions and heterogeneity of notions concerning 'informal or personal networks'. Each author defines networking in a different way depending on the context.

"A network is a set of people connected by friendship, influence, work or communications" (Bass, 1990).
"My 'network' is really very simple: it is a collection of people, usually with a specified realm of interest, which tends to keep in touch to exchange informal information" (Foy, 1983).

Basically we can identify two kinds of networks:
- Implicit networks: unconscious/conscious, informal
- Explicit networks: conscious, formal

Both networks are essential for the functioning of society, organizations, subparts of society, etc. The implicit network is formed by people and is based on

information exchange. An explicit network is more concerned with formal agreements, legal constructions or common activities. These two kinds of networks can be seen as extremes: in real life one can identify a large number of intermediate forms.

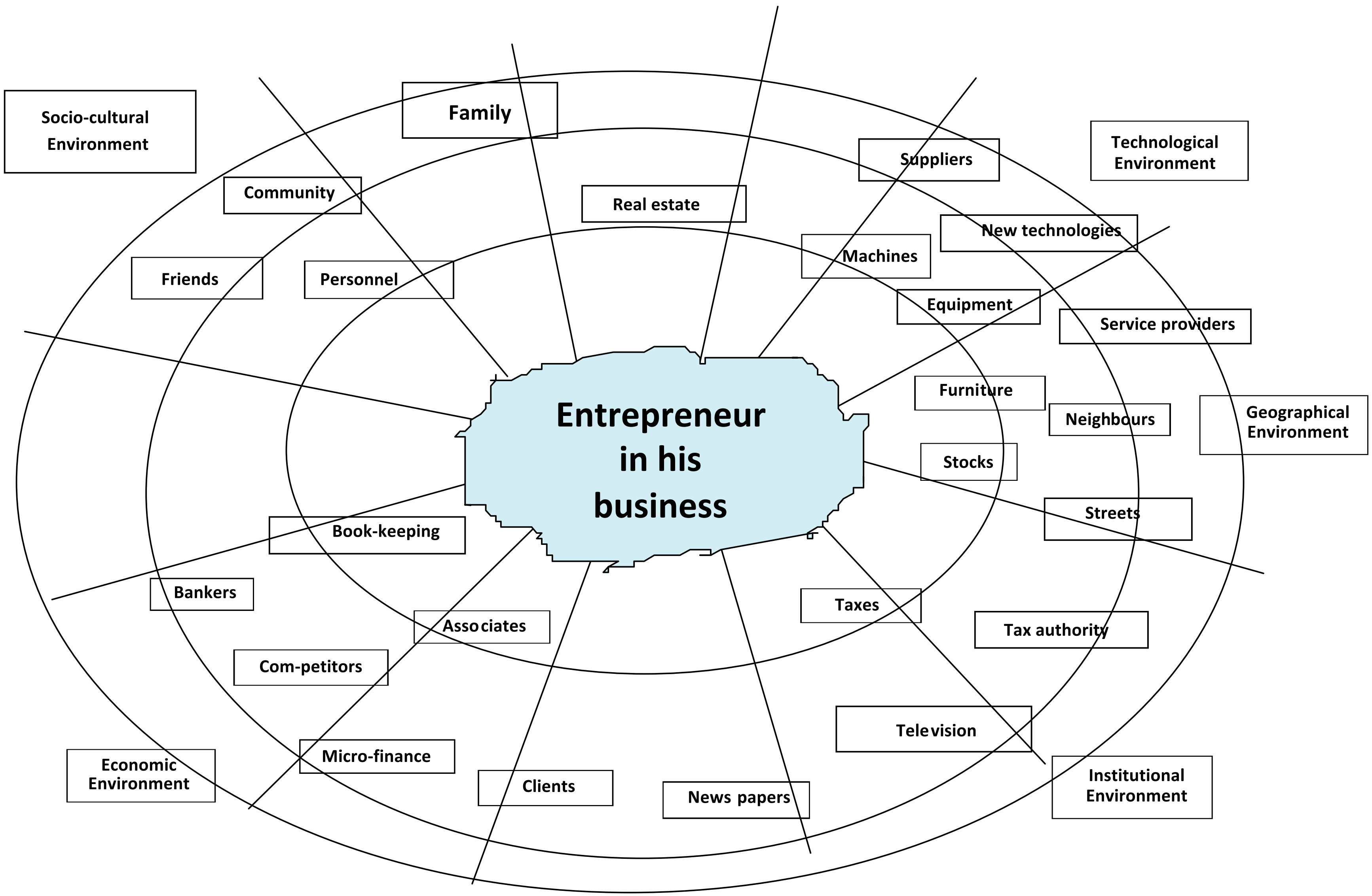

Solar power pack displayed for selling

Basic Principles of Networking
Earlier we saw that trust is one of the basic principles which is essential for the functioning of an informal network. This is probably true whatever context you take. Another basic principle that we identified was the fact that if you want to pick the fruits of your network(s) you have to work actively on building and maintaining a network. A third principle is reciprocity or "the art of give and take". Networking is a two- sided affair, traffic must go in both directions.
A characteristic of informal networks is the fact that they are non-hierarchical. Foy observed and recorded the 'Law' "The effectiveness of a network is inversely proportional to its formality" (Foy, 1983).

Three basic principles:
1. **Trust**
2. **Maintenance (or active participation)**
3. **Reciprocity**

These are the basic three principles that any individual, who wants to build up, maintain and exploit consciously his informal networks, must respect. Furthermore we have seen that you can do this more effectively if you manage to occupy a strategic position within your network(s). And that a strategic position can result in power, especially when other people depend

7.2 THE BUSINESS ENVIRONMENT MAP



7.3 SUPPLIES

Supplier Research

Write down a component inventory-what you need to purchase to sell your product.
Component Inventory:
What types of materials or products do you need to purchase for the sale of one product?
From which possible suppliers? Where are they located?
Which currency do they accept?
Write down possible suppliers and contact them to understand their terms, availability and process.

Supplier 1: supplies____
Name:
Location:
Product type(s):
Sales price:
What are the payment conditions? (30-day credit, 90-day credit, in advance):
Payment is made in what form? (cheque, wire, money order, dollars, local currency)
When can the product be shipped? How long will it take to arrive?

Supplier 2: supplies____
Name:
Location:
Product type(s):
Sales price:
What are the payment conditions? (30-day credit, 90-day credit, in advance):
Payment is made in what form? (cheque, wire, money order, dollars, local currency)
When can the product ship? How long will it take to arrive?

Supplier 3: supplies____
Name:
Location:
Product type(s):
Sales price:
What are the payment conditions? (30-day credit, 90-day credit, in advance):
Payment is made in what form? (cheque, wire, money order, dollars, local currency)
When can the product be shipped? How long will it take to arrive?

7.4 IMPORTANT POINTS FOR ASSOCIATIONS STRENGTHENING

All members should have the same reasons for joining a association, e.g. economic aims, social aims. If everyone has different aims, this can lead to disagreements or conflict.

Members should be similar types of people, they should be keen to work hard together and should be of similar economic status- this will reduce conflict and increases the likelihood of good understanding between them.

Members should have permanent interest and have easy communication and contacts.

Members should think carefully about including relatives in the association - relatives often get on well with each other, but sometimes presence of members from the same family in one association can cause problems for other members.

Members should have realistic expectations about association/association membership - joining association will not mean that all problems will instantly be solved. Being in the association involves responsibilities as well as benefits. It involves working hard to build up strong activities which will later start to show up good results. Quick results are rare - all members should understand this from the start, and should try to set themselves realistic goals for their activities.

What Makes a Successful association?

Energy services platform can be used as a source of income generation and energy supply to household, café, maize milling etc.

- Members have the same interest(s) and clear objectives.
- Members are honest, and willing to work hard to achieve their objectives.
- Members decide on rules and regulations for their association and agree to follow them.
- Members hold regular meetings.
- Members participate in discussions, decision-making, record keeping and sharing benefits.

How to Implement Associations Rules
What are the association rules?
Association/association rules form an agreement drawn up by members of a association to direct and guide their activities. The association rules are meant for all members, both leaders and members.

Why do we need the association rules!
We need association rules for several reasons:
To draw up a suitable regulations to help us to achieve our objectives
To run activities efficiently
To understand responsibilities of members
To understand responsibility of leaders
To know the right of members
To help to ensure transparency and to build atmosphere of trust amongst association members
To ensure that regulations are not infringed and to show what steps to take if regulations are infringed.

Association rules should be clear on:
The purpose and objective of the association
The organization and structure of the association/association e.g. number of members.
The leadership structure and responsibilities of leaders and their period in office
The responsibilities and rights of the association members (including by-laws regarding penalties for infringing the association or association rules)
How many members must be present at a meeting (the quorum) to make decisions taken at the meeting binding.
The association's financial arrangements e.g. membership fees or contributions, sharing of profit.

When can we use the association rules?
To ensure that we stick to our goals
To educate new members
For election of new leaders
To set membership fee and ensure are paid on time
As guide when running the common enterprise
To begin a new association activity
When communicating with other stakeholders (local government, others)
To replace leaders who are not doing their jobs properly
To keep a check on the association treasurer.
To ensure the regulations are not infringed.

Suggested elements of an association constitution/rules
1. Name and registered office of the association
2. Objects of the association
3. Membership

4. Governing organs
    - 4.1 Members conference
        - 4.1.2 Functions of members conference
    - 4.2 General council
        - 4.2.1 Functions of general council
    - 4.3 Executive committee
        - 4.3.2 Functions of executive committee
5. Office bearers of the association
6. Principal Officers of the association
7. Sources of funds and resources management
8. Control against infringements
9. Amendment of the constitution
10. Dissolution of the association

Different sustainable energy technologies can be used to generate income to entrepreneurs

Different Baked products for income generation

Entrepreneurs with improved baking oven and the products

TaTEDO – Centre for Sustainable Energy Technologies and Services

Briquettes produced from carbonized saw-dust and rice husk
TaTEDO- Centre for Sustainable Energy Technologies and Services