



Training on Mobile Phone Repair and Entrepreneurship Skills for Income Generation Activities for Youth

Textbook ver.5

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MESSAGE FROM THE CHIEF EXECUTIVE OFFICER ACCEPT INTERNATIONAL

This skills training package, as part of the Accept International program is created to provide young people with skills for successful income generation. Accept International is proud to take the lead role in undertaking this program for youth in mobile phone repair training for youth from informal settlements in Kenya.

The goal of the project is to support training in specific technical/vocational skills as identified as a gap by Accept International; the program is looking at the possibility of creating economic opportunities for young people which can adequately demonstrate the market demand through relevant training and can equip young people with the skills and know-how on a short-term basis in the mobile phone as demanded by industry and provides them with the tools to enable them to start their businesses and provide hands-on work experience through the 10 days training.

Accept International in partnership with the Youth-led development partners is looking at the long-term program that will be working with young people and linking them with the relevant companies that can provide quality, market-relevant technical skills training to unemployed; out-of-school youth ages 18 - 30. Since skill mastery will require practical demonstration of the competencies associated with the targeted skills, we have provided several mobile phones both iPhone models and Android for practical learning.

The program also involves training in micro-enterprise, facilitating access to capital and practical skills training in related areas of mobile phone repair, determining local market needs, pricing and business bookkeeping, marketing, customer relationship management, etc.

Further to the Mobile Phone repair training skills, the organization aims to introduce life skills training, which will enable young people to engage especially in communication and problem-solving skills.

Youth completing this core program will receive a work-readiness certificate that they can use as a credential with local employers or as a reference to the skills they have acquired during the training program.

We hope young people in Kenya will make the most of this opportunity to be self-reliant and proud of themselves as passionate entrepreneurs.



Yosuke Nagai , CEO Accept International

MESSAGE FROM THE COUNTRY PROGRAM DIRECTOR

First and foremost, we would like to take this opportunity to thank the team that worked tirelessly on this training manual/handbook and also the valuable support received from Accept International's Japan headquarters as well as our local partners.

We also commend the step taken by the team comprising of Accept International Japan Staff and Volunteer members for putting together this amazing guide. It is an opportunity for young people within the network to come together to express their feelings toward the understanding of the roles and responsibilities of the youth development agenda.

The voices of young people are increasingly being heard in communities across the world – in business, education, employment, politics, service delivery, and in philanthropy. Young people struggle to be heard and, sometimes, they are invited to be part of the development and evaluative processes. Increasingly, they are given opportunities to participate in decision-making roles.

Research and anecdotal evidence tell us that when young people have meaningful decision-making roles, stronger communities are built and young people construct their protective factors against risk. Putting this into practice, however, can be challenging all around the world.

The challenge demands a closer look at the real situation facing most youth at the local level, and their organizations. In many cases, it is quite evident that youth organizations are not in a strong position to effectively and efficiently promote and implement strategies at the community level. Furthermore, it is important to highlight the fact that at the community and national level in Kenya, many youth organizations do not have adequate capacity to empower themselves to work as equals to local government and other civil society actors.

Accept International strategy combines the principles of positive youth development, youth leadership, empowerment, and active citizenship, to show how youth participation in the work of sustainable urban development can promote the creation and sustainability of effective programs and services for the future.

Therefore; we are proud to release this Guide Book for you and your community to use.



Mr. Hassan Abdikadir, the country program director

Introduction of Accept International

Accept International is an international NGO established in 2011, whose headquarters is located in Tokyo, Japan, taking action to create sustainable peace in the world. We have been operating in Kenya, Somalia, Yemen, and Indonesia and our main target is young people who have the potential to be social changemakers.

Especially in Kenya, we have provided counseling and mentoring, technical/vocational and educational training, entrepreneurship training, and life skills training such as active communication and problem-solving for youths to be youth leaders.

In this training, we will focus on income generation through entrepreneurship, especially with mobile phone repair skills.



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Goals of This Training

1. To get basic knowledge of business and entrepreneurship
2. To master mobile phone repair skills and learn how to put them into practice
3. To be self-employed and generate income by yourselves

Important Notes

1. It is necessary that the participants attend all 10 days of sessions and pass the examination on the final day to complete this program and get certificates and toolkits on the final day.
2. Though the program supports income generation, only attending the program can't guarantee that you start a business or get a job. Participants are expected to actively attend the whole program and also to continue learning even after the program, to be successful business owners.
3. Accept International doesn't have the budget to provide financial support but will give out mobile phone repair toolkits so that you can start repairing immediately after the training, and also we will give you advice for running the business.
4. Accept International can't take responsibility for any accident related to mobile phone repair. Always be careful when using the repairing tools.

Acknowledgement: This project is funded by Japan Science and Technology Agency (JST), Toyota Foundation, Suntory Foundation, Japan Society for the Promotion of Science (JSPS), Obayashi Foundation, Nomura Foundation, and JICA Research Institute.

Introduction: Why Income Generation?

Goal: To make yourself ready for the training

What do you want to do with the income? How do you want to spend your money to realize your dreams and goals?

Exercise

- 1) Think of what you want to do if you had 20,000 Kshs per month. Share with the whole group.
- 2) Continue the exercise by increasing the amount of salary (50,000, 100,000, 500,000 Kshs).



Conclusion

It is a fulfilling life when you work hard to accomplish your dreams and goals. This program is to assist you to get skills to have a more satisfying and fulfilling life. Let's do it together!

1. Mobile Phone Repair Skills Training

6 Advantages of Choosing Mobile Phone Repair as your first career

Goal: To understand the advantages of mobile phone repair

Advantages of mobile phone repair

1. Mobile phone repair has high demand and profitability



The demand for phone repair is increasing at a rapid speed. You can expect to earn more than in other professions.

2. Higher education is not necessary

As long as you have knowledge about phones and business management skills, you always have a chance to be a successful business owner, no matter your education record.



3. Mobile phone repair is easy to learn

It is relatively easy to understand the structure of a mobile phone and how to repair it. What you need to do is 1) identify the problem, and 2) replace the broken parts with spare parts.

4. The training period is short

Thanks to the simplicity of mobile phone repair, you do not need to spend a lot of time to acquire it. In this training, we will spend only 10 days for intensive training and 4 months for follow-up support.

5. Professional technicians gain a lot of respect in the industry and among customers

More and more people want to have their phones repaired as quickly and accurately as possible. If you can do that, you will receive high respect not only from customers but also from your community.



6. It does not require a huge investment

Lastly, there are not so many things you need to prepare to start the business. For example, you don't have to rent a space, but instead, you can run a business at your house or directly visit your clients at the beginning. Moreover, you will receive a basic repair toolkit after the training.

Conclusion

Based on the reasons above, mobile phone repair is one of the most advantageous jobs as your first career.

Types of Smartphones

Goal: Understand an overview of the types and models of phones

Android

It is the software developed by Google and the hardware is made by various companies - Samsung, Huawei, Nokia, Tecno, Oppo, Infinix, Xiaomi, Intel, etc. The shape of phones varies depending on the company, but the parts used and the basic structure are the same.



iPhone

It is the hardware developed by Apple and the software is called iOS; in Apple's case, both software and hardware are made by the same companies. The structure of the iPhone is quite different from that of the Android. But it does not differ greatly between different models, so you can learn to repair it easily with basic structure knowledge.



Activity

When you buy spare parts for phone repair, you need to buy certain types of parts that are manufactured for certain types of phones. Which model of phone from which manufacturer do you use?

In general, you can discover them by checking Settings.



- Android: Go to Settings, select “About phone” and see “Model & Hardware”
- iPhone: Go to Settings, select “General” and see “About”

But sometimes you cannot even boot the phone and check the Settings. In that case, you should try the following:

- Ask the phone’s owner
- Look at the back of the phone and check its manufacturer and model



- If the phone doesn’t have the information on its back, look up photos of phones on the Internet and find the one with the same features and type. Phones have different characteristics according to their manufacturers and models. For example, you can look at the type of home button, the size of the screen and camera, etc.

Conclusion

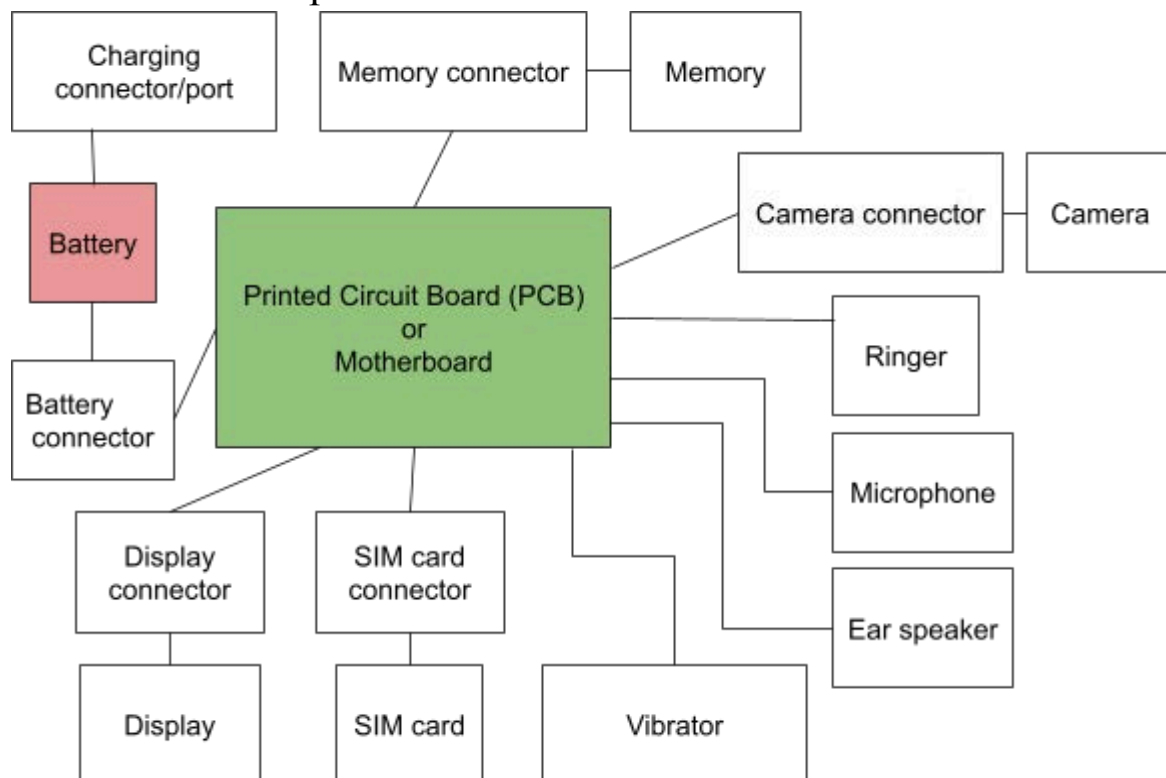
You must understand which type of phone you are dealing with before you start the repair, as different types of the same phone have different structures. Otherwise, the parts you have bought may not be used or you will end up repairing them in the wrong way.

Parts and Structure Inside Smartphones

Goal: Understand the overall structure of smartphones and what parts smartphones are made up of and what function each one has

The overall structure of smartphones

Look at the diagram below. It simplifies the structure of smartphones and how each component is connected to the other.



Many components are connected to the **Printed circuit board (PCB)** or **motherboard**, which plays a central role in operating smartphones. The battery is also very important as it provides electricity to the PCB and other parts beyond.

Parts of smartphones and their functions

NOTE: The images of the parts below are just examples.

PCB (Printed Circuit Board) or Motherboard

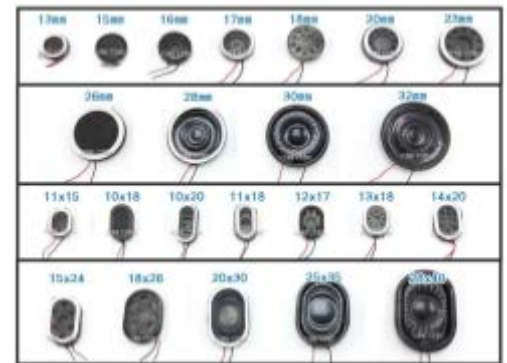
It is a medium that contains an electrical circuit and helps interconnect components within electronic devices. As shown in the photo, components are soldered to the board onto metal pads so that they can send signals and electric power.



It is used in almost all electronic products such as tablets, TVs, and laptops. PCB is the same as the human brain so if it is damaged, it is so difficult to revive it.

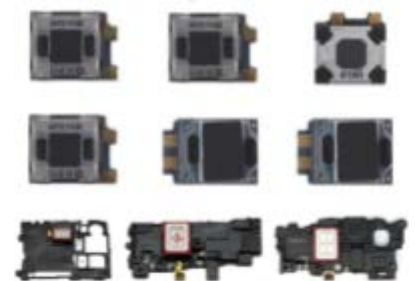
Ringer / Loudspeaker

The ringer (also called a loudspeaker) plays loud sounds and music on mobile phones.



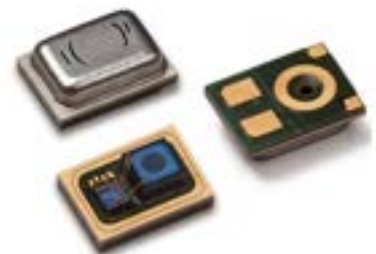
Ear speaker

It helps to listen to sound during phone calls when the loudspeaker or headphone is NOT ON. **Ear Speaker and ringer are two different internal parts of a mobile phone.** Any loud sound always comes out from the ringer and NOT from the ear Speaker.



Microphone

It transmits the sound of the speaker during phone calls. It also helps to record sound on a mobile phone.



Vibrator

It creates vibration in phones when the vibration mode setting is turned ON.



Charging port/connector

It connects the charger to the battery to help it recharge. It has four footings and five terminals. The one above in the image is for smartphones and the one below is for TuliTuli phones. Make sure to buy/use the correct type of port since there are many types of it.



Data cable connector (Basically micro-B)

It helps to connect the mobile to another device such as a computer, laptop, or tablet using a data cable.



Battery

It supplies power or current of electricity to each part of the mobile phone. It can store electricity temporarily but the capacity of holding electricity will gradually decrease as time goes by.



Battery connector

It connects the battery to the internal circuit tracks of the PCB of a mobile phone.



SIM (Subscriber Identification Module) card

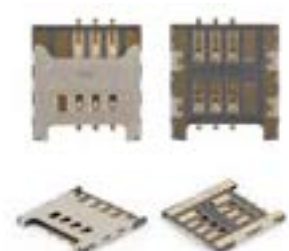
This is a small chip that contains the information of your account of the smartphone company (Safaricom, Airtel, Telkom, Equitel, etc.).

To connect to the Internet or make phone calls, it must send and receive signals to and from base stations nearby.



SIM card connector

It connects the SIM card to the Circuit or PCB of a mobile phone.



Memory card

It is used to store data like documents, music, videos, and photos. These are available in different capacities.



Memory card connector

It connects the memory card to the PCB of a mobile phone.



Camera

It is used to capture images or record videos. Cameras of mobile phones are available in different megapixels. It has two types these days, one for the front camera (selfie camera) and the other for the back camera.



Camera connector

It connects the camera to the PCB of the mobile phone.



Power button

It helps to switch the mobile phone ON and OFF. The image here shows a power button with a strip, which connects the button with the phone itself.

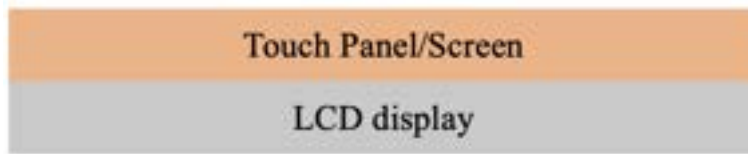


Display

The display comprises an LCD and a touch panel; while an LCD projects images you usually see on your phone, a touch panel sensors your finger



pressure and changes it to a signal. The touch panel is on the LCD.



Display connector

It connects the display screen to the PCB of a mobile phone.



Fingerprint sensor

It reads and remembers your fingerprint to allow only whose fingerprint is registered to access the phone. When your finger is placed on the sensor, a light under the sensor illuminates the fingerprint and scans it.



Internal Antenna

It helps to capture network frequency.



How to remove the parts

There are three main ways to remove parts.

1. Dissolve solder with a soldering tool or heat gun
2. Use a heat gun or home dryer to dissolve glue
3. Remove connectors or screws with spatula



The removal method also depends on the type of phone. Find it on YouTube or ask other fundi or trainers.



But there are some tips for you:

- Bigger parts tend to be attached with glue and screws
- Smaller parts tend to be soldered on the body



Conclusion

It is important to understand the function of the parts, and how they are connected overall. There are other parts than those introduced here, be proactive and learn as you repair.

Tools for Mobile Phone Repair

Goal: Understand the types of tools, how to use them, and cautions

Mat



You should use this mat, especially its storage areas to arrange small parts such as screws and have a neater working environment.

Heat gun



It is a device that emits a stream of hot air. For phone repair, it is often used to soften the glue and remove a screen from the main body. Or it is used to dissolve solder.

Caution

1. Do not touch the hot nozzle right after using it.
2. Always turn off the switch and unplug when not in use and never put it down on your workbench.

Suction Cup Pliers or Sucker



If you repair an iPhone, where you have to pry up the display to get inside, a pair of suction cup pliers or suckers is a great tool to have.

Opener/Guitar picks



This is inserted between the body and the screen. You should slide it gently on the whole edge to remove the glue between them.

Spatula



You will use this plastic tool to avoid breaking some sensitive parts inside the phone when you remove cables or some other small parts.

Plastic card



You will use the card to remove the screen without damaging it. If the glue is strongly attached, you may apply a home dryer kidogo kabisa.

Screwdrivers

These are used when you remove and connect screws. There are several types and in order not to strip screws, you must be careful and use an appropriate one. Also, you must not use it strongly so that you will not strip the screw.



Star Driver and Plus Driver

Activity

*You must know the differences between star driver and plus driver and identify them. Take a look at your drivers and classify them into star drivers and plus drivers within the group.

Tweezer



You need to use this when you grab small components such as screws. If you use this strongly, the screws will fall from the table and you may lose them. Be careful!

Glue



You use it to glue components, such as a screen, when you exchange it.

Home dryer and Brush

This is to clean up uchafu or oxidation (something rusty). Dip the brush into the cleaner and brush the connecting point inside the phone.



Soldering Tool



You need a soldering tool to remove components, such as charging ports, that are soldered to other parts of phones

Conclusion

You need to use various tools to repair mobile phones. But some can be dangerous and require extra caution to use. Follow the instructions to use them safely.

How to Identify the Faults and How to Repair them

Goal: Understand what kind of faults there are and what the symptoms of each and how to identify the real reason for the faults

Common factors of faults

This section introduces some of the common factors of the faults.

- **Part's disconnection**

- When the part is not adequately connected, the electricity cannot flow and some problems may happen.
- You just need to reconnect them properly.

- **Motherboard Problem**

- Motherboard is the most important part of smartphones which stores a lot of information and contains a CPU so it is similar to the human brain.
- When the motherboard has faults, such as physical damage by dust or water, the software issue will happen or the phone will never be powered.
- Unfortunately, it is recommended that you do not deal with this problem at the beginning because you may break the phone by damaging it when you use the soldering tools.

- **Spare Parts Issue**

- Sometimes the spare parts are defective and do not work well, even though they are new.
- Also, they sometimes don't work because of incompatibility with the phones.
- You should ask the shop and change them for new ones. And it's better to go to the shop with the customer's phone to test if the spare parts work.

- **Water Short-Circuit**

- When the phone is dipped into the water, a short-circuit will happen. The current of electricity easily flows in the water and it will deteriorate the correct way of the flow.
- What must be done first is **to remove the battery**. Then it must be put into the rice which absorbs water. Do not use

the heat gun or dryer because it will push the water deeper inside the phone.

- **Rust of Component**

- Rust can hinder the flow of electricity and affect the phone's smooth work.
- Clean up the connecting port with a home dryer and brush.

- **Temporary Software Error**

- Even though the mobile phone has been developing, there are always temporary software errors, such as the freeze of the phone, errors in download of the application, network/server errors, and update errors.
- If something goes wrong, restart the phone first and see if the problem still persists. Also, you can reset the setting, uninstall the application and download it again, close the background application, and delete the unnecessary files.

Case study of the faults and causes

Let's take a look at common phone problems and reasons. It's important to find the real cause by trying all possibilities one by one.

Case 1: The phone cannot be charged.

Possible causes and how to test

1. There is a connection problem with the AC adapter.
 - Use the other AC adapter or other socket.
2. The charging cable is broken.
 - Use the other charging cable.
3. The circuit from the charging port to the battery is broken
 - Insert the AC adaptor and use your tongue on the connecting part. If you feel the electricity, the circuit has no problem.

4. The battery is weak and cannot store electricity anymore
 - Check the battery health in the Settings or in the battery health app
 - Insert the AC adaptor for a while and touch the battery with your hand to check if the battery is hot. If it is hot, the battery is charged.
5. The charging port is broken or rusted.
 - Clean up the part with a home dry cleaner and brush.
 - Only if you try the option above, change the charging port with a new one to see if it works.

Case 2: The screen does not show up.

Possible causes and how to test

1. There is no charge left in the battery or there is a problem with the battery.
 - Insert the AC adaptor for a while and touch the battery with your hand to check if the battery is hot. If it is hot, the battery is charged.
 - Otherwise, you change the battery with a new one.
2. The circuit from the battery to the screen is disconnected.
 - Open the phone and see if the connection is okay.
 - Use your tongue
3. There is a problem with the screen (LCD display) or a disconnection problem.
 - Disconnect the screen, return it again and try to turn on the phone. If there is no signal, replace the screen.

Case 3: Some lines appear on the screen.

Possible causes and how to test

1. The circuit from the battery to the LCD is disconnected.
 - a. Open the phone and check if the screen connector is well connected.
 - b. Use the multimeter.

2. The LCD is broken.
 - a. Try the above ones and this is the final possibility so just replace it with new ones.

Case 4: The phone cannot be connected to the internet.

Possible causes and how to test

1. There is a problem with the Internet provider.
 - Check with your friends.
 - Restart the phone
 - Reset the Internet setting
2. The place is too crowded or some big building hinders the connection.
 - Move to another area.
3. The antenna is broken (a very rare case).
 - Try the above ones and this is the final possibility.
4. There is a problem with the APN setting.
 - Remove and reinsert the sim card
 - Download the profile of APN setting from the internet

Case 5: You can't hear the voice well when you talk on the phone

Possible causes and how to test

1. The provider's problem.
 - Try WhatsApp call or some other application other than a direct call.
 - Call other friends.
 - If the sound quality is the same, that is not the provider's problem but probably the problem of the ear speaker.
2. There is a problem with the ear speaker.

Case 6: The phone is overheating.

Possible causes and how to test

1. The phone was exposed to high temperatures.
 - Avoid exposing the phone to direct sunlight.
 - Reduce the screen brightness.
2. The phone is on intensive tasks including video games, graphic processing, or camera usage.
 - Close/delete unused apps.
3. Ports are covered with dust.
 - Clean charging port or headphone jack.
4. The charging cable doesn't fit the phone.
 - Use a standard charger that the manufacturers recommend.
5. The battery lost its capacity.
 - Replace the battery.

Conclusion

One phone problem has many potential causes. When you embark on mobile phone repair, try to seek the cause of the issue from many perspectives.

Wiring and Soldering

Goal: Learn how to work with wires and solder safely

When you want to detach or attach phone components from a motherboard, you need to use a soldering tool and solder wire/solder paste.

Solder paste *(Used to DETACH)*



Solder wire *(used to ATTACH)*



When the solder wire is melted at a high temperature, it functions like glue but it becomes solid right after you pull out the soldering tool from the part.

Instructions for soldering

<Removal>

1. Prepare a soldering tool, solder paste, and a tweezer.
2. Apply solder paste on the component you want to remove.
3. Heat the soldering tool and apply it to the part.
4. Remove it with a tweezer while.

<Installation>

1. Prepare a soldering tool, solder paste, solder wire and a tweezer.
2. Cut a piece of solder wire.
3. Place the component in the right place with the solder paste.
4. Heat the soldering tool and melt the wire to attach the component

Caution

1. Never touch the tip of the soldering tool.
2. Be sure to conduct soldering on a flat table and mat. When not in use, never put it down on your workbench.
3. Turn the unit off or unplug the tool when not in use.
4. Inhaling too much smoke from soldering could harm your health. Conduct work in a well-ventilated area and avoid breathing smoke by keeping your head to the side of, not above, your work.

Android Phone Repair: Itel A37

Goal: Understand the actual repair process with visuals and the risks and measures of each replacement

GROUND RULES FOR PRACTICAL PART

1. Ask the trainer how to do the process before trying on your own and breaking the phone, if you have any concerns and questions.
2. Follow the instructions of the trainers keenly and feel free to ask where you don't understand.
3. Don't proceed at your own pace. If you finish earlier than others, you should wait for other participants.
4. Concentrate on the process. Don't get distracted by anything such as phone calls from your friends.

Operation Check

Before opening any phone, do the operation check.

1. Does the phone turn on?
2. Does the phone screen work?
3. Does the touch panel work?
4. Does the camera work?
5. Does the mouthpiece work?
6. Does the earpiece work?

Removing the battery from the main device

***Do not remove other connectors before the battery since that might cause short circuits. Always disconnect the battery first.**

1. Turn off the phone.

Remove the back cover from the phone with a screen opener.



2. Remove the 18 screws on the black frame inside.

You must use a **plus driver** to remove it.

*Be super careful not to strip the screw by using the driver very gently. Otherwise, the screw thread will disappear and you will no longer remove the screw.

*Some of the screws may be covered by the seals so you carefully look for them.

3. Warm up the battery with a heat gun.

Apply the heat gun round, especially on the edge of the battery. The battery will be broken if you apply the heat for a long time without moving the heat gun around. You can also use a home dryer to dissolve the glue with a plastic card.

*Be careful with the motherboard area when using the heat gun not to break it with heat

*Be also careful when using a home dryer. You could ruin a screen or camera like the photo below if you apply it mingingi sana.



4. Remove the battery with a spatula.

To see if the glue has been warmed up, with a spatula, you insert it inside the battery and main device

*Be super careful not to break the screen strip under the battery. If you break it, the screen will not work anymore and you have to compensate for it with your money.

*Also, you have to be careful not to bend the battery with force.

■ Removing the screen from the main device

In most cases of Android, it can be opened from the backside.

1. Disconnect the screen connectors from the main device

This is to make it easy to remove the screen.

2. Warm up the screen with a heat gun

You dissolve the glue and make it easy to remove the screen.

Apply the heat gun round, especially on the edge of the screen.



3. Insert a plastic card between the screen and the main body.

*When opening the screen, you must not insert anything between the touch screen and LCD. In the left photo below, the blade is between the touch screen and LCD. If the blade is inserted under LCD, you can't see anything from the surface.



4. Remove the screen from the back

Always remove the screen slowly so that you will never damage the device. Before you can grab the screen, you also have to remove the screen strip glued on the main device.



Here, make sure to remove all the glue to prevent the remnant from causing trouble to other parts.

5. Repeat the previous steps in reverse order.

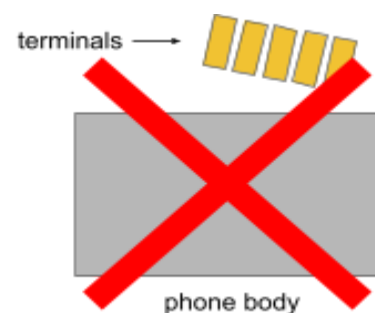
Go back through the steps you've taken so far and put the parts back together. Put a small amount of B7000 when you put a new screen. Be careful not to mix up the positions of the screws you have removed.

* Wrap a rubber band around the phone until the screen gets fixed.

Removing the charging port (**Most Difficult Part**)

What you need

- Heat gun
- Tweezer
- Soldering tool
- Soldering wire & paste
- Spare of the charging port



1. Put some solder paste on the soldering tool
2. Apply the heat gun on the charging port
 - *Be careful not to ruin the charging port. If you heat it too much, the terminals might come off or be broken and electricity will no longer flow.
3. Use a tweezer to remove the charging port (a solder sucker can be another option)
4. Prepare a new charging port
5. Put some paste on the soldering tool
6. Apply a piece of soldering wire to attach the new port



*If you apply a lot of solder, the electricity will flow in the wrong way and there will be short circuits.

Multimeter

A multimeter is useful to see whether a charging port is functioning or needs to be repaired. It is a tool to measure the amount of electric current and voltage in a circuit.



How to use

1. Insert two cords into the bottom right of the multimeter
2. Connect each cord to two phone parts you want to measure (e.g., charging port and battery).

3. Adjust the dial and see if the electricity is running. If the multimeter shows 0, then that charging port requires a repair.

Operation Check

Do you remember the items for the operation check? You should do it even after repairs if it works.

iPhone Screen and Battery Replacement

Goal: Understand the actual repair process with visuals and the risks and measures of each replacement

Operation Check

Before opening any phone, do the operation check.

1. Does the phone turn on?
2. Does the phone screen work?
3. Does the touch panel work?
4. Does the camera work?
5. Does the mouthpiece work?
6. Does the earpiece work?

***Before any repair, make sure to disconnect a battery connector. Otherwise it could occur short-circuit.**

Removing the screen from the main device

1. Remove the SIM card slot

Turn off the phone.

Remove the SIM card slot so that you can open the phone.



2. Open the iPhone

Remove the two screws on both sides of the Lightning connector. You must use **Star driver**.



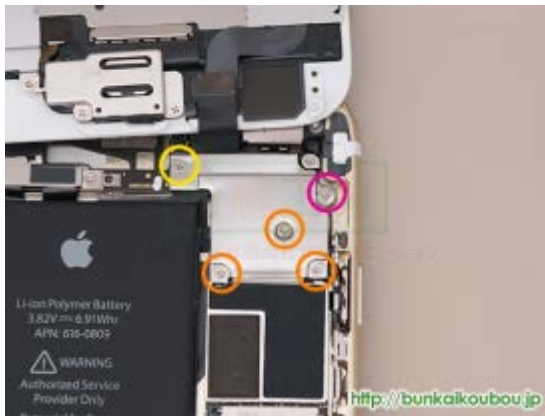
Warm up the phone with the heat gun 10cm above it for 15 seconds. Put the sucker on the screen (near the home button), or insert a plastic card to open it carefully. ***Don't open it from the side of the ear speaker because you might cut the cable inside.**



3. Remove the screen from the main device

Remove the five screws by using the **Plus driver** and take the

plate out of the device. ***Remember the position of each screw because each has a different length.**



Disconnect the four cables by using a spatula in numerical order as shown in the picture. Then, remove the screen from the device.

4. Remove the home button from the screen

Remove two screws that fasten the home button with the **Plus driver**.



Disconnect the extension cable with a spatula. And remove the two rubber covers with a tweezer or spatula. You can also apply a home dryer to make it easy to remove the rubber.



Then, take the home button and touch ID sensor from the screen.

5. Remove the ear speaker from the screen

Remove the three screws with the **Plus driver** from the board.

***Remember the position of each screw.**

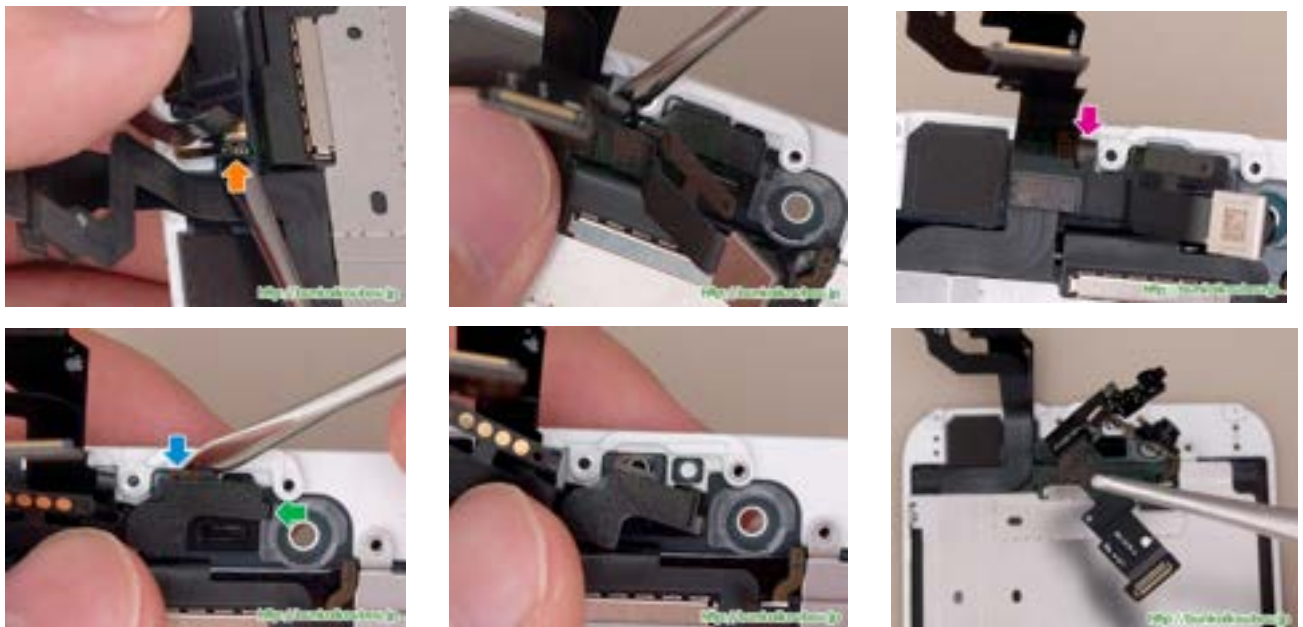




Lift the front camera and you can see the ear speaker inside.

6. Remove the front camera from the screen

Insert a spatula between the front camera and the screen from two different points to loosen the bonding.

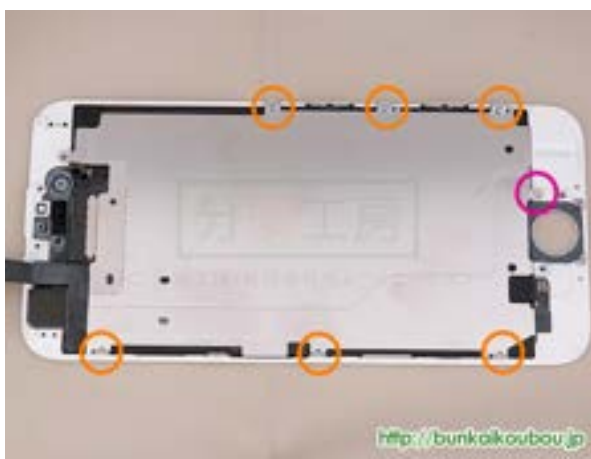


Lift the front camera from the two points and remove it.

7. Remove the backplate from the screen

Remove the 7 screws on the backplate with the **Plus driver**.

***Remember the position of each screw because each has a different length.**



8. Attach the new screen

After removing all parts from the screen, put the backplate on the new screen.



9. Repeat the previous steps in reverse order.

Go back through the steps you've taken so far and put the parts back together. Be careful not to mix up the positions of the screws you have removed.

*** Make sure to put the black strip under the silver plate on the iPhone screen.**

Removing the battery from the main device

1. Remove the battery connector

Remove the 2 screws with the **Plus driver** to take the plate out.

***Remember the position of each screw because each has a different length.**

Disconnect the battery connector with a spatula.



2. Remove the vibrator

Remove the two screws with the **Plus driver** and take out the vibrator. This is not a must but it makes it easier to remove the tape under the battery.

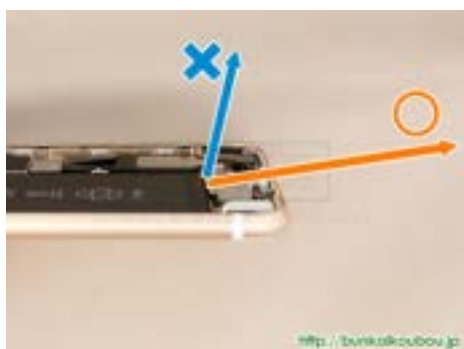


3. Remove the battery

Lift up the 2 tapes behind the battery with a tweezer to pull them.



Pull out the tapes as horizontally as possible. Be careful not to cut the tape. If the tape is difficult to remove, you will apply the home dryer to dissolve the glue.



Lift up the battery with a spatula and attach the new battery with glue



*If someone has already replaced the battery before you, it may be attached with glue or double-sided tape.

4. Repeat the previous steps in reverse order.

Go back through the steps you've taken so far and put the parts back together. **Be careful not to mix up the positions of the screws you have removed.**

Tulituli Phone Repair

Goal: Understand the actual repair process with visuals and the risks and measures of each replacement

Operation Check

Before opening any phone, do the operation check.

1. Does the phone turn on?
2. Does the phone screen work?
3. Does the touch panel work?
4. Does the camera work?
5. Does the mouthpiece work?
6. Does the earpiece work?

Screen Replacement

*All the photos used in this section are from ECS Baig's video on YouTube.

1. Remove the back cover and battery

Remove the back cover and battery. Use a spatula or a screen opener if needed.

2. Remove the SIM card



3. Remove all screws and plate

Remove the six screws by using the **Plus driver** and take the plate out of the device with a spatula.



4. Remove the motherboard

Use a spatula and remove the motherboard.



5. Remove the LCD screen

Use a spatula or a plastic card and slowly remove the LCD screen except for the screen connector.

Put some soldering paste on the connector, and then apply a soldering tool. Use a tweezer to pinch and remove the connector.



6. Attach the new screen

Put some soldering paste on the new LCD screen's connector and apply a soldering tool to attach it to the phone.

***Make sure to check the size of the connector and prepare one with the same size.**



7. Repeat the previous steps in reverse order.

Go back through the steps you've taken so far and put the parts back together. **Be careful not to mix up the positions of the screws you have removed.**

Charging Port Replacement

1. Remove the back cover

Remove the back cover with a spatula or a screen opener.

2. Remove all screws and plate

Remove the six screws by using the **Plus driver** and take the plate out of the device with a spatula.

3. Remove the motherboard

Use a spatula and remove the motherboard.

4. Remove the keypad buttons sticker

Use a spatula and remove the keypad buttons sticker.



5. Remove the charging port

Use a heat gun to warm up the charging port, and remove it with a tweezer.



6. Remove solder from 4 holes

Some solder is left in the holes. Put some solder paste and remove them with a solder sucker.



7. Attach a new charging port

Prepare a new charging port. Put some solder paste, and then apply a soldering tool to attach it to the phone. Make sure to solder five terminals as well.



8. Repeat the previous steps in reverse order.

Go back through the steps you've taken so far and put the parts back together. **Be careful not to mix up the positions of the screws you have removed.**

Get your own customer

Before the training ends, try to find at least one customer and provide a phone repair service. Then you can receive practical advice from trainers and financial support for purchasing spare parts easily.



What if you break your customer's phone?

Although you must avoid any failures in repairing phones, what should you do when it happens?

1. Ask for other fundi's help as soon as you notice your mistake. Do not try to fix it yourself as the damage could be unrecoverable.
2. Be sincere and apologize to your customer.
3. Reimburse your customer.

Breaking a phone can also damage the **data** inside. If possible, ask your customers to **make a backup** using a Google account/iCloud/SD card to prevent losing the phone data during repair.

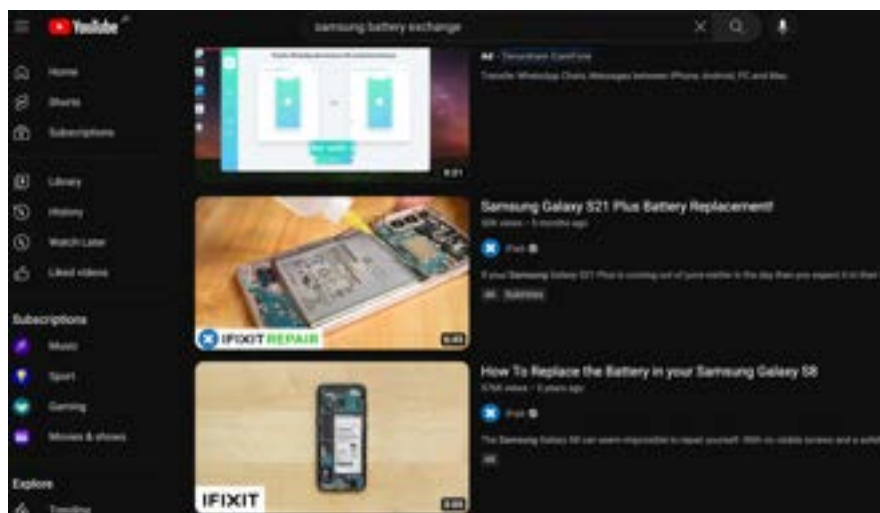
More Skills Development

Goal: To understand how to learn more repair skills

Self-learning

There are many ways to learn mobile repair skills available online.

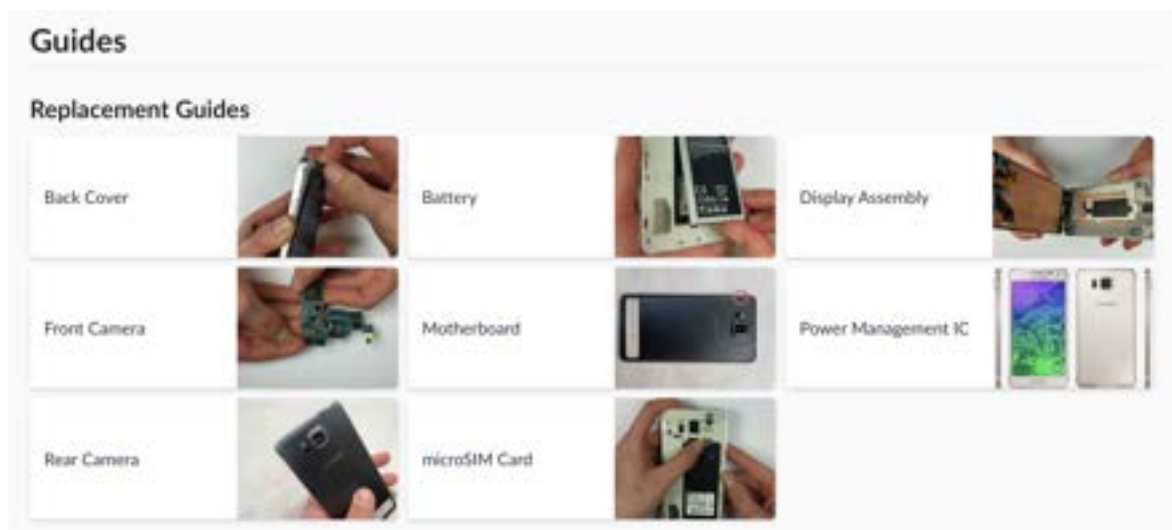
- **YouTube**



- a. Many videos of mobile phone repair are uploaded on YouTube. Try searching “mobile phone repair course” or more specifically “Tecno pop5 screen replacement” to learn skills with clear visual instructions when repairing the first model you repaired.

- **ifixit.com**

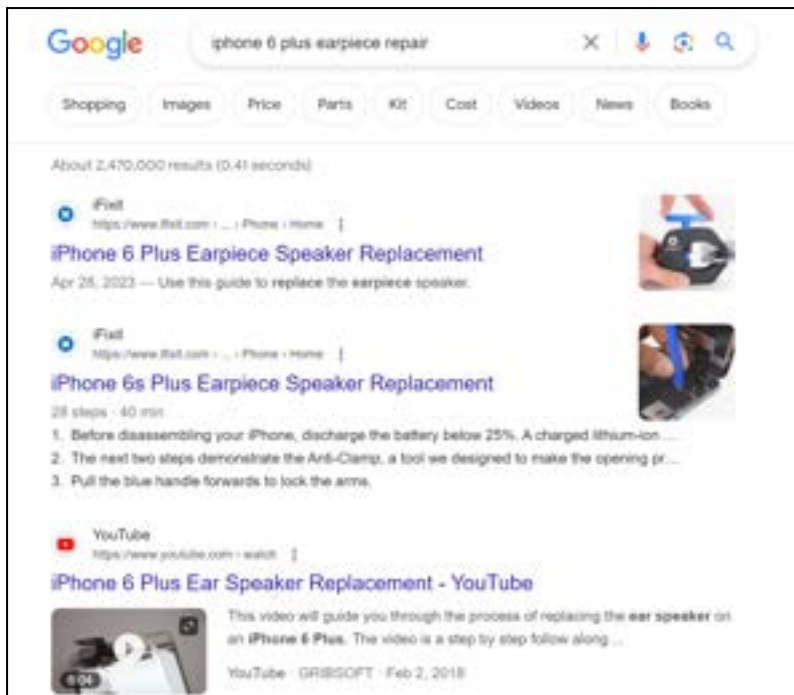
- a. This website stores many helpful repair guides that are classified for almost all types of phones (Samsung, Tecno, Huawei, etc.). The instructions are well-organized and easy to follow. You can also ask questions on a forum or learn from the answered questions.



Improving your research skills

You can also use research engines to collect information for your repair. The Internet always has answers to your questions; research it first and try the suggested solutions.

Example: If you want to know how to fix an earpiece for iPhone 6 plus, you can look it up like the screenshot. Even if you didn't find specific information for the phone type you are looking for, you can still refer to the instructions for similar models (e.g., iPhone 6 or 7).



Learn additional features

Phones are developing quickly and many new features have been added in recent years. Always keep up with new technologies, and google for repair methods when needed. Below are a few examples.

In-display fingerprint sensors

Recent phones have a specific sensor that reads and stores your fingerprint. When you place your finger over the scanner, it matches the fingerprint with the stored data and unlocks the device.



Foldable screen

Some recent phones' screens are made of Organic Light Emitting Diode (OLED), which emits light when electricity passes through it. Because OLED does not require many layers to display images compared to phones with LCD screens, phones with OLED screens can be thin enough to be flexible and foldable.



Practice on your own phone or someone's old phone

- Try to open the phone and see inside. And try to remove the battery, screen, or some other part.
- Always follow the process of watching the video on YouTube before doing it. There are subscription plans where Youtube is unlimited or someone in the community can share it with you.

2. Basic Business and Entrepreneurship

You will acquire basic business skills and knowledge and learn how to implement business ideas from a long-term perspective

Setting life goals

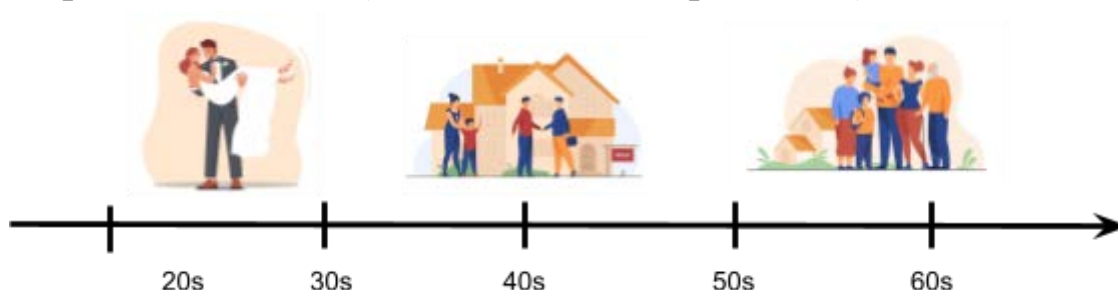
Goal: Set your own life goals and be able to save money for realizing your goals in the future

SMART is a useful framework to set clear and attainable goals.

Specific	Your goals should be focused and have tangible outcomes.
Measurable	Make sure your goals are trackable and have a clear definition of success.
Achievable	Try to set goals that could be challenging, but possible.
Relevant	Make sure that your goals are aligned with your values and what you really want to do in your life.
Time-Bound	Decide specifically when you will achieve the goals.

Activity

- 1) Based on the SMART framework, take time to think about what you want to accomplish in your life. Write them down in the life plan table below (see Kamau's example below).



Kamau's life plan



I want to have a family in my 30s! And ...

<p>~25</p> <ul style="list-style-type: none"> • Be able to exchange/repair phone parts that are on the texts • Get 50,000 Ksh from some friends or financial institution • Start my business and earn more than 20,000 Ksh a month 	<p>25-29</p> <ul style="list-style-type: none"> • Earn more than 50,000 Ksh a month • Have more than 10 regular customers every day • Get married 	<p>30s</p> <ul style="list-style-type: none"> • Get stable family • Buy a car • Earn 50,000 Ksh a month, get extra staff and expand the business
<p>40s</p> <ul style="list-style-type: none"> • Move to a more spacious house • Earn more than 75,000 Ksh in total 	<p>50s</p> <ul style="list-style-type: none"> • Teach my children the business through my experience • Stay healthy by working out • Go on a vacation 	<p>60s (After retirement)</p> <ul style="list-style-type: none"> • As an elder, help youths in my community get a job

Create your own!

~25

25-29

30s

40s

50s

60s
(After retirement)

Conclusion

Though your main focus will be the mobile phone repair, you should also look at your life from a longer point of view, as working towards future goals gives you hope and makes your current life brighter. Let's make a great starting point from here for your fruitful life.

What is Entrepreneurship?

Goal: To understand the significance of entrepreneurship

Entrepreneurship can be summed up as **the attitude to create new values and bring innovations despite any risks.**

1) Look at the set of words in the box below.

Leadership	Ability to lead and influence people around you to realize your goals. For example, share your goals with others so that they will support you.
Patience	Resilience to undergo difficulties and continue making an effort. It will be hard to get customers when you just open a repair shop. You must be patient until you succeed.
Negotiation	Ability to discuss with others to reach goals. Customers have various requests that sometimes go beyond your service (e.g., paying too little for your repair). You must negotiate with your customers patiently to offer services that satisfy both your customers and you.
Critical thinking	The ability to analyze facts from multiple perspectives with an effort to remove a bias. For example, there is a bias that women cannot be fundi wa simu — but is it true? And why not? Being critical and flexible allows you to expand your chances in life.
Ability to deal with the unexpected	Preparedness to face unexpected situations and deal with them calmly. What would you do if your house got robbed and you lost repair tools and money? Then, you could start working at another repair shop and build connections with repairers and customers more than before. Be creative and flexible to deal with the changing circumstances.

- 2) Choose two entrepreneurship qualities that they are confident in, in addition to the other two that they want to improve through this program
- 3) Share what you chose with your group members and write them down in the table below

Qualities you have confidence	Qualities you want to improve

Conclusion

All the spirits are positive, forward-looking, and strong-willed. Try to understand your strengths while also improving other abilities to accomplish your goals.

★Market Research★

Goal: To learn the significance of market research and how to do it

Market research is a good way to know how to have a business that attracts customers and does better than your competitors.

Would you buy a smartphone with a slow internet connection that will cost you 100,000 Kshs?

The answer is No, of course. It's because people do not pay for such a low-quality phone. Therefore, you cannot sell your goods/services well if you don't understand what people really need and want.



You also need to provide better service than your competitors (entrepreneurs in the same industry as yours). Otherwise, your customers might choose the competitors over you.

Information Gathering in the Market

This is an effective way to grasp the local needs and the market situation. What you need to do are:

1. Talk to potential customers.

- What special needs or expectations about the services attract them?
- What do they feel about other businesses that already provide these goods and services?

2. Observe competitors' businesses.

- How much do they charge?
- What is the difference between the most and least successful businesses?
- How do they attract customers?

3. Ask friends, family, and other peers.

- What do they think of your business idea?
- What goods and services sell well in their business?
- What do they think about your competitors' services?



SWOT Analysis

Another method is SWOT Analysis. SWOT stands for

- **Strengths:** Advantages of your business or yourself (e.g. the high quality repairing, the strategic location, and many friends)
- **Weaknesses:** Characteristics of your business or yourself which could be improved (e.g. the weak financial skills, and too shy)
- **Opportunities:** Chances that happen outside of your business which could be your advantage (e.g. the construction of a new road, and increase of smartphone users in Kenya)
- **Threats:** Things that happen outside your business which could disturb your business and reduce profits (e.g. increase of competitors, political instability, and power outage)

SWOT analysis helps you assess your business' potential in a market and how you can meet customer's needs better than your competitors. When **Strengths + Opportunities** are greater than **Weaknesses + Threats**, you can be more confident about your business. Look at the example below to familiarise yourself with SWOT analysis.

Kamau's SWOT analysis

Strengths	Weaknesses
<ul style="list-style-type: none">- Potential financial source (loan and chama) .- Support from local NGOs.- Hospitality.	<ul style="list-style-type: none">- No experience in business.
Opportunities	Threats
<ul style="list-style-type: none">- More people could start using smartphones and the number of customers could increase.	<ul style="list-style-type: none">- More people could start the phone repair business and could create more competition.

Practice

Suppose you open a new phone repairing business. Let's fill in your **Strengths, Weaknesses, Opportunities, and Threats** in the following table. Then, discuss with others on whether you can improve your SWOT table.

Strengths	Weaknesses
Opportunities	Threats

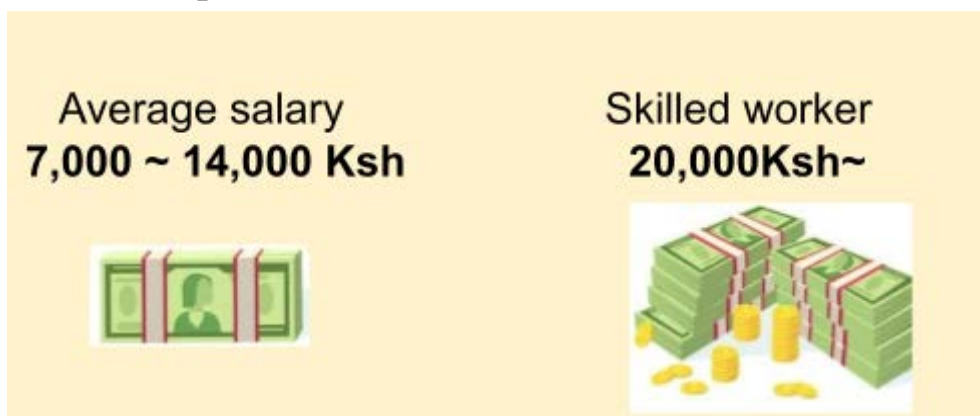
Conclusion

It is crucial to seek what annoys your customers or what they want, rather than pursuing what you want to do. Finding customer's needs that are not satisfied yet and answering them are the basic yet significant steps for your business. Do market research whenever you start a new business or feel stuck after you start the business.

Case study: Small business in Nairobi

Goal: To learn the situation of some small business cases in Nairobi

According to the research, the average wages for Kenyans in the informal sector (which accounts for more than 80%) range from 7,000Kshs to 14,000Kshs. But a skilled worker is capable of earning over 20,000Kshs per month.



Fundi wa simu is no exception — you can earn at least **1,000 Kshs** a day and even over **2,000 Kshs** when you manage a business well, which means you can get around **20,000** to **40,000** Kshs per month.

The number of salaries can vary depending on the type of occupation. Look at the average monthly income for different occupations below.

Drop Shipping



This becomes a popular business that will not require you to have a starting capital nor a physical shop. What you need to start this kind of business is just a mobile phone that can access the internet. You will join WhatsApp groups for various suppliers. They will be posting their products then you can repost their products on your WhatsApp status to find potential customers. You may also do the same on various e-commerce platforms like Jiji, Jumia, Kilimall etc. The good thing with this kind of business is that you can also decide to sell varieties of items ranging from shoes, cloths, electronics, furniture etc

Boda Boda Mechanic



The bodaboda mechanic business is recently becoming attractive following the booming *boda boda* operations. With no experience in motorbike repairs, you can opt to take a short mechanical apprenticeship course to understand the dynamics of motorcycle operating systems and how to fix it.

Other than doing repair works, you can also sell motorcycle accessories to supplement the income. On a good day, you make from 2,000 KES. On slow days, you can take home as low as 500 KES.

Selling second-hand clothes / Mitumba



This is one of the most popular businesses in Kenya. Although it doesn't require much capital to start, since it is very popular, you need to compete with

so many business rivals. On average, you can make a profit of 500 ~ 1,000Kshs a day (roughly 15,000 Kshs a month).

Car wash service



This is also a popular business but you need to find a strategic location where you can secure a water source and have enough capital to prepare equipment such as washing tools and water tanks. Its average profit goes around 12,000 Kshs or more per month

Boiled eggs and Street food



The good thing about this business is that it needs a little capital to start it. However, you are expected to earn around 10,000 Kshs ~ 15,000 Kshs a month and you need clean hygiene and a food handling certificate to start a business.

Discussion: What other options might be good to explore? Let's discuss it with others. How does that business fit to your SWOT?

Conclusion

Business potential varies among different occupations and also reflects your environment and skills. It is important to figure out the potential of your business and start small, instead of being relaxed at your current place.

Hospitality in a service industry

Goal: To understand the significance of hospitality

Why is it important?

- Hospitality adds value to your service.
- Your customers evaluate not only your service/product but also your hospitality.
- Being hospitable makes it easier to build good relationships and operate your business more smoothly.

What is called “hospitality”?

- **Be well dressed and make a good impression**
 - It's not about wearing formal suits every day — what matters is small things such as fixing your hair and wearing modest and neat clothes. Otherwise, customers do not consider you a professional.
- **Energetic and fresh greetings with a smile**
 - Don't you feel welcomed when a store clerk greets you with a bright smile? A warm welcome and smile can give your customers a positive impression of you.
- **Proper use of language to gain your customers' trust**
 - You don't want to be served by a rude waiter who uses bad language to you unless you are close friends. On the other hand, communication with proper language helps you gain trust since it shows your politeness and sincerity.
- **Showing your gratitude**
 - Customers feel appreciated when a shop clerk says “thank you for coming.”, **though it's sometimes the opposite in Kenya.**



- But you can't run your business without your customers and the support from people around you — showing your gratitude is a crucial part of your business.

Let's take Japan as an example.



Employees at many Japanese hotels welcome customers with polite greetings and sometimes even serve them a free cup of tea. Furthermore, if customers have some allergic foods, staffs prepare special meals for them.

Which one of the following do you want to pay for?

Suppose you want to have a haircut, and you have two barber shops near you. **The price and the quality of service are the same.**

Hairdresser A is always rude, discriminative and untidily dressed.



Hairdresser B is always friendly, amicable and neatly dressed.



The answer could change according to where you live and who you talk to. Additionally, culture never stays static (the Kenyan culture has changed greatly over 50 years) and different people have different reactions, you must be able to determine if you can trust the other person. But hospitable hotels usually have a high reputation for their hospitality, and such a reputation gives them an opportunity to get more customers through word of mouth.

Conclusion

Hospitality is important to gain trust and grow your business since you will be able to differentiate your business from others.

Business Ethics

Goal: To understand the concept and the importance of business ethics.

Ethics refers to standards of conduct that indicate how one should behave. They are based on the moral duties and virtues that arise from principles of "right and wrong."

To maintain ethical standards in your business, the following two aspects are very important: the **ability to distinguish right from wrong**; and **the commitment to do what is right**.

They may include:

- High standards of service delivery;
- keeping a positive public image to your business;
- Ensuring professionalism in your business
- Ensuring a culture of honesty to stock trust
- Ensuring proper time management
- Ensure quality service delivery

Typical Scenario 1: Let us assume a customer comes to your shop for a mobile phone repair service, after negotiation; you agree with the customer that the estimated wait time should be 30 minutes, Unfortunately after 30 min the customer comes back and finds the job still pending completion. *In this case what should you do?* **Let's discuss:**

Typical Scenario 2: You charge the cost of a phone repair service including the spare cost and the customer makes a down payment for you to start the job? After you visit the spare shop in the CBD, you find out that the cost of the spare is higher than you had initially told the customer. *In this case what should you do?* **Let's discuss:**

Hint: please also include the best time to inform the customer about this, whether before or after you procure the spare part.

Monitoring and Review

Goal: To understand the significance of monitoring and review, and how to conduct them

In this section, you are going to learn one of the most important parts of your business: **regular monitoring and review**.

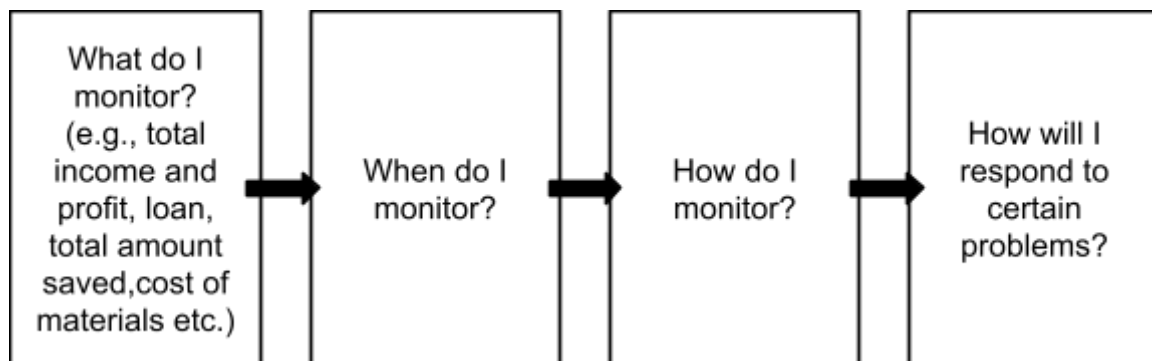
Although you will complete every program and create the best business plan, it never goes as you expect. In most cases, you must face difficulty or failure. For example, what if you didn't earn as much as you planned? What if you face emergencies such as sickness, and power outages?

If you don't monitor your business regularly, you could fail to respond to these issues promptly and fall behind in your life goals and plans.

It is therefore critical to create a plan for monitoring and reviewing your business so that you can operate the business while making sure to follow the plan and modify it as necessary.



You need to decide on the following points as shown below:



Conclusion

Your business never follows what you planned. With this understanding, you must still take action to get closer to your ideal. Monitoring and reviews are reliable means to take control of your business progress.

Understanding the Balance of Expenses and Income

Goal: To learn about basic bookkeeping and utilize it in your business

You cannot downplay the importance of bookkeeping, which means keeping a record of every business transaction.



It is like conducting a health check of your business — knowing how much you spend and earn can help you get a sense of the current situation of your business, which enables you to quickly respond to problems such as a shortage of money and can't buy the spare parts.

How to keep books

1. Every day write the date and the balance of the money.
2. During the business hours, keep receipts of every transaction.
3. Write down every activity during your business hours, and write the earnings in the category “MONEY IN” and the expenses in the category “MONEY OUT”.
4. Calculate and write the remaining balance every time.

Practice

- On April 10th, 2023, you repaired a smartphone screen. The screen costs 1,200 Kshs and you charge 2,600 Kshs.
- On April 11th, you replaced the battery (The battery cost 500 Kshs and you charged 1,000 Kshs for each).
- On April 12th, you bought micro SD to sell to the customers.

DATE	ACTIVITY	MONEY IN	MONEY OUT	BALANCE
9/4/2023	Savings			3,000 Kshs

Conclusion

You could make a loss if you don't keep up with your business's condition so always be aware of the importance of bookkeeping.

3. Putting Skills into Business

You will be prepared well for income generation through the mobile phone repair business

First of all, remember your life plans and goals. **How much** do you need to earn per month **to achieve your life goals**? Let's set a goal for your monthly earnings.

Your age plan	Expected monthly expenses	How much do you need to earn monthly?
~25:	<ul style="list-style-type: none">- house rent:- utility cost:- internet cost:- food expense:- social insurance:	*You also need to think about savings for your long-term life plans and life after retirement
25-29:		

30s:		
40s:		
50s:		
60s (after retirement):		

In this chapter, you will learn tips to promote your business. In other words, these are the keys to reach your life goals.

How to Overcome the Barrier of your First Repair

Goal: Get your first experience using the skills you learned

The first obstacles you may face are lack of confidence and trust. But every Fundi operating the business started from your stage. The point here is **how you can get experience**. Even if you can't charge your family, you get experience, which will benefit you in the long run.

Here are some possible first customers:

1. Old classmates
2. Neighbors
3. Family members and relatives

Who and how to approach? Let's make a list of your own future customers and think of how you convince those people.

Name	Relations	Contact number/ the way to contact	How to approach? What would you say to him/her?

Strategies from the past participants

Some of the past participants of our programs created their own strategies to overcome the first barriers and start their businesses.

1) Participant A provides **phone checkups and cleaning services** at places where many people gather like seminars, churches, cyber cafes, and youth group meetings. Even though she doesn't have a physical store, she gets a certain number of customers.



2) Participant B had a chance to work as an intern at a mobile phone repair shop in town through his friend's introduction. He often went shopping near his friend's shop and built relationships with several shops, sometimes as a broker to gain the owner's trust and finally got an opportunity to work with him after presenting his practical experience in the training. After gaining experience at his shop and saving money, he rented a space near the shop and opened his own store. This is a good example of using a connection with friends and getting trust from the owner.



3) Participant C tried to get closer to the spare parts shops with the toolkits and was luckily introduced to a phone repair shop where there was a need for someone to work with.

4) Participant D bought dead phones, repaired them, and sold them to make profits.

Collaborating with other services/shops

1) Cooperation with cyber cafes

You can cooperate with a cyber cafe to expand your service. The biggest advantage is that you can use the internet there to look up repair methods during repair. You can also promote your business to those using printing services. It is also beneficial for cyber cafes to work with you because your service adds another value to it.

2) Working with smartphone accessories shops

Working in a phone accessory shop makes it easy for you to check up your customers' phones and suggest necessary repair services. While some female fundi wa simu may face gender discrimination, female

clerks at phone accessories shops usually don't. Collaborating with them helps female technicians build trust with customers.

3) Borrowing space in other shops

You can also borrow a small space in your friends' or acquaintances' shops (e.g., mitumba shop) to operate your business.

Conclusion

You should keep yourself busy to get experiences instead of idling. Once you repair over 15 phones, you will get a lot of confidence.

Sales strategies in Mobile Phone Repair

Goals: Understand basic knowledge of sales strategies and create appropriate sales strategies on your own

What kind of sales techniques are there?

There are various sales techniques, and they can be largely categorized into two types: outbound and inbound sales.

Outbound Sales:

Outbound sales is a way of reaching out to potential customers from your side to build new relationships and introduce your business, instead of waiting for someone to come.

- Door-to-door sales
 - Visit the neighbor's houses to present your service with the toolkits. You can also ask them if they know any acquaintances/friends who need a phone repair.
 - Visit the places where there're a lot of people(E,g, university, church) to present your service with the toolkits.

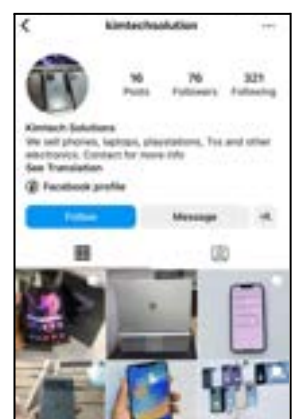


- Telemarketing
 - Call your friends, relatives, or acquaintances and present your service.
- WOMAN (Word Of Mouth And Networks)
 - Walk around and give leaflets and handouts to spread information.
 - Socialize with people by attending events, forums, community centres, and conferences with the toolkits.

Inbound Sales:

Inbound sales is the process of increasing the visibility of your business and helping potential customers find you to satisfy their needs.

- Ask your friends or previous customers to spread the reputation of your business through WOMEN.
- Ask other business owners to recommend your business to their customers by giving them business cards or flyers.
 - You have to build a good connection with as many business owners as possible by being a good customer for them.
- Put flyers on bulletin boards, community centres or busy roads.
 - It's better to put your personal info such as your photos, background or your previous customers's voice.
- Keep posting photos of the training or customers' voices on social media so that your followers will contact you when necessary.
- Create your business account on Facebook, WhatsApp business page, Instagram, Twitter, etc. to introduce your service.



- You can utilize hashtags such as #Fundiwasimu and #phonerepair so that people can find your service easily.
- Register your business on Google Maps
 - You can do it by creating an account for “Google My Business”
- Promote your phone repair business on Jiji to increase your visibility.



Other useful approaches

- Prepare a referral discount
 - Decrease the service fee for those who were referred by your previous customers.
 - Follow up with your previous customers to let them bring new customers (details explained in the next section)
- Prepare special benefits
 - Offer some small services (e.g. phone cleaning, charging service, phone check-up) or some discount to those who have come to your business many times.

How do you present your strengths to get opportunities?

You also need to explain your strengths well to obtain an internship opportunity, secure a place for your repair shop, and get customers. Below are some examples of your strengths you can use:

- “I received training from a Japanese NGO.”

- Japan is considered a high-tech country so you can even use photos with Japanese staff as evidence.
- “I gained practical experience by actually repairing phones.”
 - Most phone repair learning institutions do not offer the opportunity to work on real phones.
- I can provide services for both Android and iPhone.
- I have a certificate for mobile phone repair.
- I also have learned about customer service and business.
- I have a lot of friends and communication skills.

Activity: What is your sales point (your strength)?

When you present your business to people, you must present your sales points or your strengths to make them want to use your service. Take time and think about what kind of things about your business can be your sales points.



My Sales points (strengths)

Conclusion

How to sell beyond the people around you is one challenge, but you can overcome it by creating your own strategy. You must keep thinking to attract customers.

Tips for How to Communicate with Your Customers

Goal: Learn effective communications to improve your service

1) When a new customer visits you, the first conversation with him/her is crucial to understand the accurate cause of your customer's phone issues.

For example, if your customer's phone screen isn't working, you should ask detailed questions like these:

- When did the phone screen stop displaying?
- Why did it happen? Did you drop your phone or step on it?
- Is your phone charged enough?
- Was the screen on right when it stopped working?



You must understand and memorize different causes for various phone issues to have effective communication for phone repair. Look

back at the “How to Identify the Faults and How to Repair them” section.

2) There are cases when your customers ask for phone repair but do not come back to receive it. To prevent such a loss of time and resources, you could ask them for a deposit when they visit you.

3) There are cases when your customers are not nice to you. Instead of just giving up, you can have business with them by communicating effectively. Let’s practice with examples.

Practice: How to react to the following statement?

Case 1



A customer is interested in your skills but tells you **“You are still a beginner and I’m a bit worried that you can repair my phone.”** How would you react?

Case 2



You told your customer a price for phone repair. However, the customer says **“The other shop charged me cheaper. Can you give me a discount?”** How would you react?

Case 3



The customer decided to ask you to repair the phone. But the customer told you **“How soon can I get the fixed phone? I will go to Mombasa this evening so I want the phone repaired urgently.”**
How would you react?

Example answers:

Case 1

“I learned practical skills from the NGO based in Japan intensively and I had an opportunity to practice on the real phone, sir. And I can communicate with the NGO’s staff and I’m cooperating with other Fundi. You can trust me and just let me see your phone’s issue (with a smile)!”

Case 2

“I charged you a good price, madam. The spare part is now expensive because the import cost is increasing. And I can offer pleasant and quick service that will satisfy you. But if you can buy other products/services or bring other customers, I can give you a discount.”

Case 3

“No problem, sir. We still have 3 hours until evening. I can replace the screen for around 30 minutes and I have my friend in town so I can ask him to buy the spare. He is coming back here in 1 hour so just come back in 2 hours and you can get it.”

Conclusion

You must have good communication with your customers to provide better service. Also, prepare in advance for what your customers are likely to say.

Customer Relationship Management in Mobile Phone Repair

Goal: Understand the need to manage and build customer relationships

Why do you need to build a good relationship with the customer?

You may look for new customers once you finish repairing phones for previous customers. However, it is the previous customer who can bring you business opportunities easily.

What is CRM (Customer Relationship Management)?

CRM is a strategy to sustain and improve relationships with your customers to drive sales growth.

It is challenging to attract new customers unless your business is super famous. But your precious is probably satisfied with your service so if you can maintain good relationships you can create more business chances.



For example, you can reach out to your previous customers and ask them to come with their friends, by offering referral discounts for them to visit the shop again.

*However, your customer may come back immediately after the repair with the same issue which could consume your time. To avoid the case, you need to tell the customer beforehand that you can fix the same issue only after 3 to 7 days of the repair.

Activity

You need to record information about your customers on registration forms to reach out to them again. What kind of information do you think you need? Take time to think about it.



Possible answers

- Name of customer
- Contact number
- Motives for their visit (Why did the customers ask you to repair? What were their needs?)
- What are they interested in (Are they interested in phone charging speed, screen protection, or phone cleanness?)

Below is the registration form in which you can fill the customer information. Utilize it for your business.

Possible Registration Form

Name	Contact number	Motives for visit	Interests	Phone model

Conclusion

Build good relationships with the customers so that they will come back again with another opportunity.

How much do you charge for Mobile Phone Repair?

Goal: Be able to set the appropriate price

How much do you charge customers? This is always a question when you run a business. You cannot make profits if your service is too expensive or too cheap. Try to keep your costs as low as possible and charge as much as possible.

$$\text{Your benefit} = \text{Charging Price} - \text{Cost}$$

Average cost for spare parts

This figure is just an example and it depends on which model you repair. However, it's important to know each part's rough price when you charge your customer because you don't want to make your customers wait. You also need to think about transportation costs between town and your community to buy the spare parts.

Item	Cost
Screen replacement	1,700
Battery replacement	500
Charging port, earpiece, or Other small parts replacement	50

The amount you charge

The figure below is one suggestion. Now you can calculate your benefit based on it. If you pay 1,700 Kshs for the screen, 100Kshs for the fare, and you charge 2,500 Kshs, how much you can earn? And if you get 3 customers a day, how much can you get?

Item	Charge
Screen replacement	2,500
Battery replacement	1,000
Charging port, earpiece, or Other small parts replacement	200

*Ideal minimum service charge (almost your profit) is below.

Item	Price
Screen	800
Battery	500
Charging port Other tiny parts	150

But why don't we charge more? There is no one-fits-for-all answer here but there are three things that you can remember.

1. If you charge over 30% of the phone price, the customer will feel it's better to buy a new phone. For example, if the customer uses a phone that costs 10,000Kshs, and you charge 4,000Kshs, you may lose the customer.
2. If you charge the doubled price of the spare screen, it can help you to buy another screen in case you ruin the screen or the spare screen itself has a fault. For example, if the screen price is 1,500 Kshs, you can charge at least 3,000 Kshs.
3. As you learnt in the market research section, ask your competitors' prices and make your price less than that to attract more customers. You can ask the price by using your own phone and pretending that my friend uses the same model and he is looking for the best fundi.

Saving profit

You cannot buy spare parts and eventually not open your shop unless you save enough money.

After repairing a first phone, you should at least save 1,500 Kshs to buy spare parts for the next customer. If you don't have enough money to buy spares, you cannot provide a repair service to your customer and you could lose your business chance and trust.



If you use up all the money, you will not be able to buy the necessary spare parts/repair tools, let alone open your new shop.

It's always important to think about your future and keep yourself motivated to get money.

Conclusion

There is no one-fits-for-all answer in the pricing of your service but always look at the latest trends, customers' needs, your community environment, and competitors to charge good prices. Also make sure to save some profits for buying spare parts and opening your shop.

How to buy Spare Parts

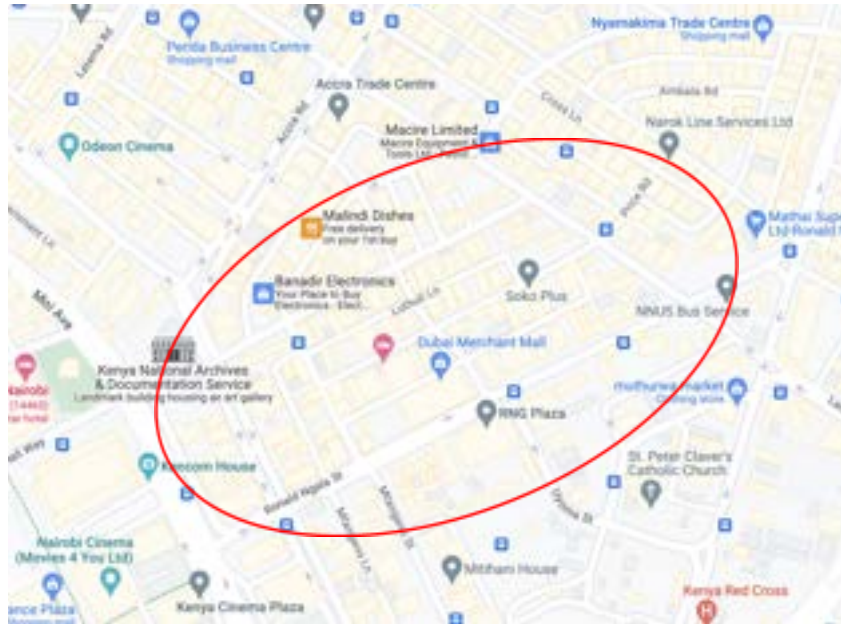
Goal: Be able to buy spare parts effectively

How to buy spare parts

1. As a business owner, **you have to visit several shops to get the cheapest one.** After a shopkeeper says the first price, you will negotiate to decrease the price. And after going around 10 shops for instance, you will go back to the cheapest one and buy the parts.
2. Try to **purchase as many materials as possible at one time** to get a discount. However, buying smartphone spare parts is tricky because there are so many types that are mostly incompatible. At least you can buy a charging port that is compatible with other phones.
3. If you can **build a good relationship with the spare parts shop**, you might get a good price or maybe they may sell the spare parts with a down payment. Keep good manners and communicate well with them to get trust.

The location of the spare parts shop

Luthuli Avenue and nearby places have so many spare parts stores.



The two shops below are famous and there are always a lot of customers. You should visit there during the training and get some information about the places.

1. Dama Mobile Spares



2. Mobitop Spares



■ Timing of Purchase

You can cooperate with others if there is no spare parts shop near you. When you find a customer in your community, tell him/her that you will keep the phone for hours or a day until you fix it. Next, find someone in town and ask him/her to buy the spare parts, adding some small money. Making a friend who is a bodaboda driver or matatu conductor is another way. Or, you can give the transportation fee to your friends or coworkers and ask them to buy spares.

IMPORTANT NOTES:

Possibly, the customer's phone is the one robbed. When you keep the phone, you have to write the customer's name and ID number in the registration form just in case, so that even if the police officer tracks the phone and comes to you, you will not be arrested. Also, you can get information like IMEI number, at what time the customer comes, etc.

Tips for price negotiation

You always want to buy spare parts cheaper to save money, but how? It is very important to put yourself in someone's shoes with whom you negotiate.

Let's suppose that you run your spare parts shop. In what situations would you decrease the price? Think about it before proceeding with the examples.

Examples:

- 1) I can decrease the price if he/she keeps buying goods from my store so I can make a profit for a longer period.
- 2) I'm willing to discount items if he/she brings other customers to my store.
- 3) If he/she buys multiple goods at once, then I can give a discount!
- 4) He/she told me that an iPhone screen is cheaper in other stores. Then I will also make it cheaper to prevent him/her from buying at another store.
 - a) But I do not want to discount some goods that are sold only by me!
- 5) He/she often visits my place and greets me, and seems like a good person. I might want to give him/her a discount.



Conclusion

There are so many ways and techniques to buy spare parts so you always look at how the other fundis are doing and try to come up with a creative idea.

How to Maximize the Profit per Customer

Goal: Consider offering additional services to increase the profit per customer

You can increase your profit by offering some additional services/products that are useful for customers. It is convenient for customers to satisfy various needs in one shop, so let us think of some options.

Ceramic Coating

Ceramic coating is a new way to protect and strengthen the phone screen which came from glass coating for cars.



Even modern smartphones still have small bumps on the surface that can cause scratches and cracks. Also, there is an issue of dust in Nairobi that could damage the phone inside.

Ceramic coating is a process in which a special glass is applied to the screen of a smartphone and the edges to create a thin and hard film that can protect against damage.

This coating has been attracting attention since it can make the screen smoother and stronger, or prevent the dust from getting inside the phone, by applying the glass fluid to the screen and edges. You can buy ceramic **coating liquid** for cars at 3,000Kshs downtown and use it for phones.

IMPORTANT NOTES:

Some bad images were spread some years ago because of con businessmen. Even if you apply the coating, the phone can be broken

if it is dropped so you never say that the phone will not be broken with the coating.

Flashing (computer is required)

Many phone users might want to flash their phones. By flashing, a phone's software settings are reprogrammed to work with a carrier/cellular network different from the intended provider.

You need to install software on your computer first, and then boot your phone into recovery mode and connect it to the computer. Look up specific booting procedures for different phone models. Below introduces some free software you can use for flashing.

Android

- DroidKit – Android Phone Toolkit
- Android Repair Master
- Cyber Flashing

iPhone

- iMyFone Fixppo
- ReiBoot

There are other software available, including the paid ones that are supposed to work faster with more functions and security. Use the best software according to your needs and resources.

However, since you need a computer and advanced skills to be able to conduct flashing, you first need to concentrate on improving your basic phone repair skills in hardware. It is also important to google appropriate software solutions based on your customer's needs.

IMPORTANT NOTES:

Possibly, the customer's phone is the one robbed. When you keep the phone, you have to write the customer's name and ID number in the

registration form just in case, so that even if the police officer tracks the phone and comes to you, you will not be arrested. Also, you can get information like IMEI number, at what time the customer comes, etc.

Resources to learn software repair

Some problems require their software to be repaired. Flashing introduced above is one of the many software repairing methods. Below are some resources where you can learn about software repair.

1. **Software repairs of mobile devices and what does technician need to know?** (Web article)
2. **“Mobile Phone Software Repairing Introduction (English Subtitles)”** by Dr-Bios com (YouTube video)
→ These are useful for the introduction to software repair.
3. **10 Best Android Phone Repair Software and Apps to Fix Android System Issues** (Web article)
→ It introduces some apps for software repair with instructions.
4. **How To Jailbreak Your iPhone: Step-by-Step Guide** (Web article)
5. **How to jailbreak your iPhone or iPod Touch** (Web article)
→ These two demonstrate how to jailbreak an iPhone. Jailbreaking is a way to repair a software issue using an unauthorized app.

Selling smartphone’s peripheral devices (Phone accessories)

Another service you can provide is selling useful phone accessories such as protective films, charging cables, phone cases, travel adapters, flash disks, micro SD cards, or TuliTuli phone batteries.

Xtreme Tech at RNG Plaza

One of the good places to buy such devices is Xtreme Tech in town.



Other small service ideas

1. Change the spoiled screws with new ones
2. Phone charging service
3. Free phone protector

Conclusion

While you first must be able to provide good quality smartphone hardware repairs, you also need to incorporate other valuable services to grow your business.

Writing An Executive Summary of your Business

Goal: To grasp the whole image of your business and be able to tell others about your business in a concise way

When it comes to understanding the overview of your business, the executive summary is useful. Also, it is essential that you explain your business plan when you ask for some capital from others.

Activity: Create the executive summary

①Who can be your customer

First and foremost, it is important to decide what kind of people you want to target as different targets have different needs. Here are some examples: university students, retailers in the community, young people who frequently go to clubs, elders who are not very familiar with smartphones, Kibanda owners, etc.

②What does the customer need or feel annoyed

Think of what the customer needs, in other words, what annoys the customer. For example, they might need a phone repair shop close to their home, other repair shops are too expensive, or they want many of their needs met in one shop instead of going from shop to shop.

③Service / Product you provide

Think about the services you offer to your customers. In this training, you will first focus on smartphone repair, so write that down. Maybe you can also sell some other items together.

④Unique value of your service

How can you differentiate yourself from your competitors for customers to choose your services/products? You can offer a hospitable service, better repair quality, cheaper service, etc.

⑤Advantage you can utilize for your service

This is also related to the unique value considered in ④. Think about the strengths of your service. Examples can be your hospitable service or high-quality repairs because you have learned from an NGO based in Japan, which is considered a high-tech and hospitable country.

If you have a friend who sells spare parts and can buy them cheaply, that must be your advantage of cheaper service.

⑥How to promote your service to consumers

Remember what you learned in the Sales strategies section. When thinking about it, choose the ones with lower costs and higher benefits.

⑦How do you earn Profit from your service

How much does it cost and do you charge? How much profit does it make? The cost of a phone is quite simple. Let's say the price of a screen is 1200 Kshs and the cost of transport to and from Town and home is 150 Kshs or so. It is up to you to decide how many phones you want to repair.

⑧Estimated Difficulties / Hard things / Walls that stand up

It is crucial to think about the potential difficulties in advance for you to cope well with them in the future. Don't be too pessimistic but don't be too optimistic either.

For example, you may not be able to find a customer, your customer has no money to pay, or you may break a customer's phone while doing a repair. Moreover, you may not be able to earn enough money in your Mobile Phone Repair business only and it may be difficult for you to stay motivated to work hard.

Example of summary of banana delivery business

②What does customer need or feel annoyed?	③Service / Product	④Unique value of your services	⑤Advantage for your service	①What kind of people can be consumer?
They want to eat bananas cheaply.	Banana delivery service to homes and restaurants.	The Delivered banana is quite fresh and super delicious more than other restaurant. / The service carry bananas to homes and restaurants, even if they are heavy.	My family and friends cultivate a lot of bananas, so I can buy bananas cheaply and in large quantities.	Housewife, restaurant, small shops,
			⑥How to promote your service to consumer ? Promote goodness of service through the distribution of leaflets by car / SNS / putting posters in various places.	

Discussion

Share your potential difficulties that you wrote ⑧ and think about together how you and other participants will overcome those challenges.

Conclusion

This business framework is very important for any business. It is no exaggeration to say that your business will not be successful without it. The market research methods in the Basic Business part will be particularly useful when thinking about this. Ask staff for feedback during this training and please make the most of this opportunity.

Getting capital for your business

Goal: To know various choices for financing your business

We will keep following up even after this training, but you have to get capital to cover the start-up cost by yourself. Thus, **it is significant to know how you will manage to start your businesses.**

Even though there are some mechanisms in society to get capital for your business (such as investment), making enough capital to start your own business **by yourself is the most reliable method.** Below are other reliable ways to make your start-up resources and capital.

Getting job opportunities in different sectors as first place

There is a big possibility that you can make enough money for a business start-up by working in different sectors (such as taxi drivers, waiters, construction workers...). Getting job opportunities for the first place will help you to earn money steadily and to learn working

habits (waking up in the morning time everyday and commute to work places) before you start your own businesses.

Ask for support from your surroundings

Thinking about ways to start one's own business **without obtaining capital** is also an important perspective.

For this, you should think about your **surroundings** (e.g. family, friends, financial institutions, local organizations, etc.). For example, a friend can support you by buying you spare parts.

You can think “What can I do without money?” “How can I utilize my networks with families, relatives, and friends?”

Chama (Merry Go Round)

It takes a system like Harambee; the members first agree to contribute a fixed amount of money for a fixed period of time. One can receive all the collected money. In the next meeting, the members again contribute money and the second one can collect all the raised money. It continues on a rotating schedule for the rest of the members as well.



Borrowing money

You may have your family members or friends lend you money if they agree. You don't need to pay interest basically. The most important thing is to get trust from them. Trust always pays.

Investment

What you need to do is to ask investors to fund your business. Prepare a reasonable business plan and if they believe your business will succeed, they will invest money. You need to be sure about repaying the money, then pay additional money as your business grows.

The most important thing here is your clear business plan and passion — you must present your business in a convincing way and present what you need and how you will make your business successful.

Loan

If you borrow money from formal stakeholders such as self-help groups, financial cooperatives, or banks, you will have to pay a fee or interest. And you also have to prepare some documents and wait for a few weeks to receive the money.



Below are some possible loans you use:

- **Hustler Fund**
- **Planner Loan from U&I Microfinance**
- **Biashara SME Loan**
- **Uwezo Fund:** All kinds of people including Muslims can also use this fund
- **The National Government Affirmative Action Fund (NGAAF):** Operated under the Ministry of Public Service, it mainly provides funds to young men and women
- **The Youth Enterprise Development**

Crowdfunding

Crowdfunding is a fundraising method where you share your business ideas and goals on the internet, and receive funds from those who support your goals. Some useful websites for crowdfunding are: **M-Changa** and **Zidisha**.

Grant

Grant is money given by the government or organizations to people for a special purpose. Its main difference from other financial services is that you do not have to pay the given money back.

One organization where you can receive grants is **Kenya Youth Employment & Opportunities Project (KYEOP)**. It provides two types of funding for young entrepreneurs:

1. **Support for Job Creation:** If your application gets approved, you will receive around 40,000 Kshs grant for your business (usually accepts applications in May)



2. **MbeleNaBiz:** 900,000 Kshs ~ 3,600,000 Kshs will be granted to winners of a competition for young entrepreneurs. (Apply by December)

Conclusion

Knowing these possible funding sources makes a big difference when you face financial difficulty instead of making excuses.

Registration of Business

Goal: To have a general idea of how to register your business

Regarding business registration, there are two levels: **national government** and **county government** levels. For the national government, you don't have to worry about it now. For the county government, you only need to register a single business permit.

It is important to do this in the right procedure because:

- Business registration is mandatory for enterprises in Kenya
- Your business would be recognized as legitimate with your business permit
- Many loans and grants require a business permit to apply

How to Register

You can register your business in the following procedures:

1. Fill in a business permit application form and verify it at the Customer Care Unit in the Licensing Department at the City Hall Annex.

The image shows a 'Nairobi City County Business Registration Form'. It includes fields for 'Business Name', 'Type of Business', 'Location', 'Date of Registration', and 'Registration Fee'. There are also sections for 'Business Description' and 'Contact Information'. The form is numbered '101/2018'.

2. Bring the verified application form to the Data Capturing unit in the same department and obtain the invoice for business license fees.
3. Pay for license fees (3,700 Kshs in total) at the Cash Office in the City Hall and receive the business permit.

The image shows a 'Nairobi City County Single Business Permit'. It includes a barcode, a 'Business Name' field, a 'Type of Business' field, a 'Location' field, a 'Date of Issuance' field, and a 'Valid Until' field. The permit is numbered '101/2018'.

4. Renew your business permit every year

Conclusion

Look back at this section when you are ready to register your business. Even if you don't register your business, you can still do the business but there are several risks so keep it in your mind.

For your Success in your Business

Hongera sana! You have completed the entire program. If you pass the confirmation exam, you will have completed the course. Completing the 10-day program can never be achieved by many. We encourage you to move on with your life with strong confidence.

But this is not the end of the story. This is where your journey begins. Keep reminding yourself of what you have learned in the program and read this manual again and again from time to time.

Also, you are not alone. If you work hard, someone around you shall help you. If you encounter some challenges, don't hesitate to contact us, as we are always here to listen to you and come up with solutions together.

Follow-up support after the program

We offer you a follow-up after this program to help you start a business. Listed below are supports you can utilize:

1. Financial assistance in purchasing spare parts (**only once when you have clear business plans and certain impacts**)
2. We will accompany you to the spare parts shops in town
3. Technical support and advice for smartphone repair
4. Advise in acquiring an internship opportunity
5. Supplementary lesson for the practical part of repair
6. Review and feedback on your business plans
7. Consultation support for opening and expanding a business

We will mainly help you until you get **20k per month** with your business. You are expected to be independent but at the beginning, you can look up to us when you face any difficulties. Good luck with your new journey!

