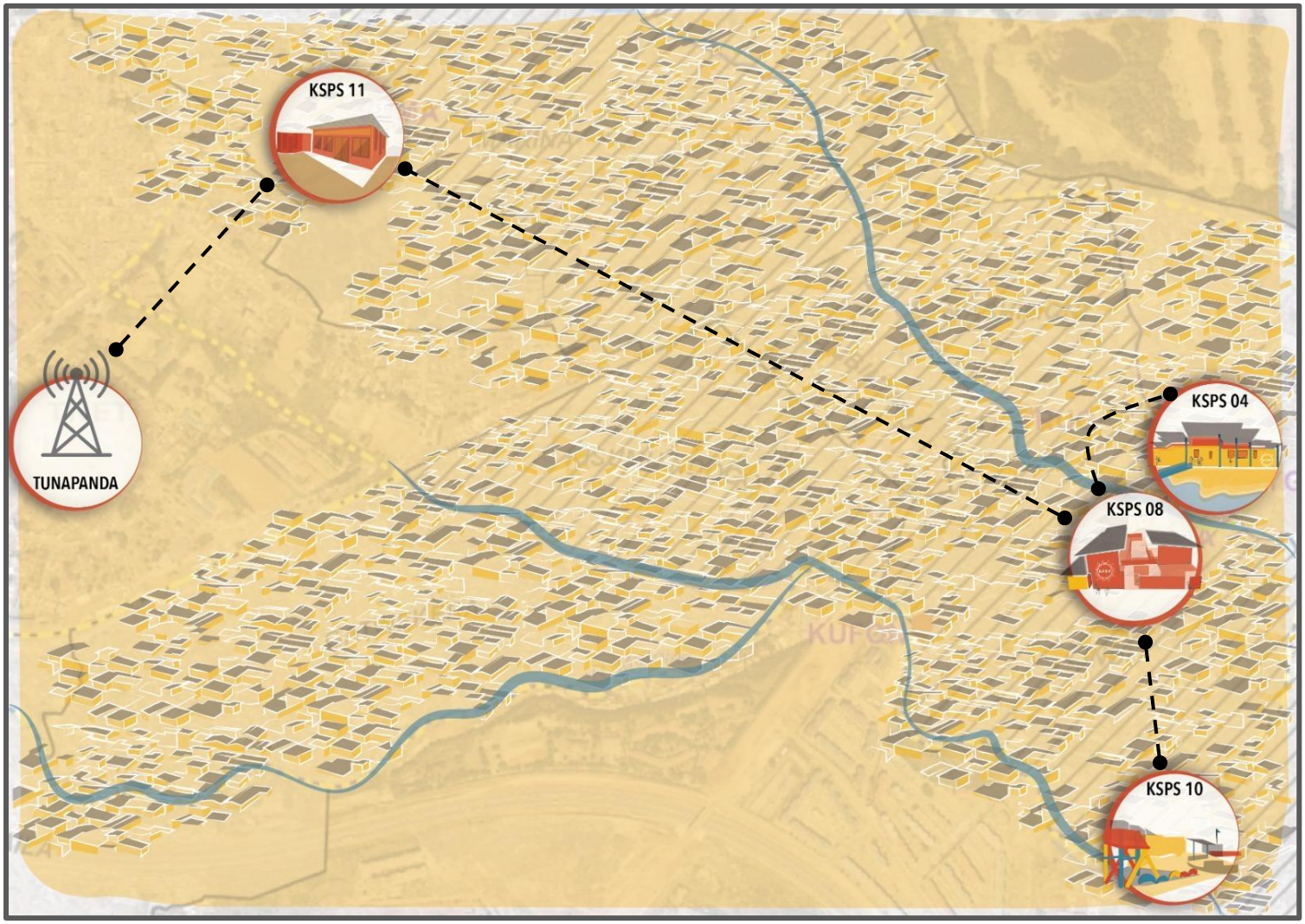
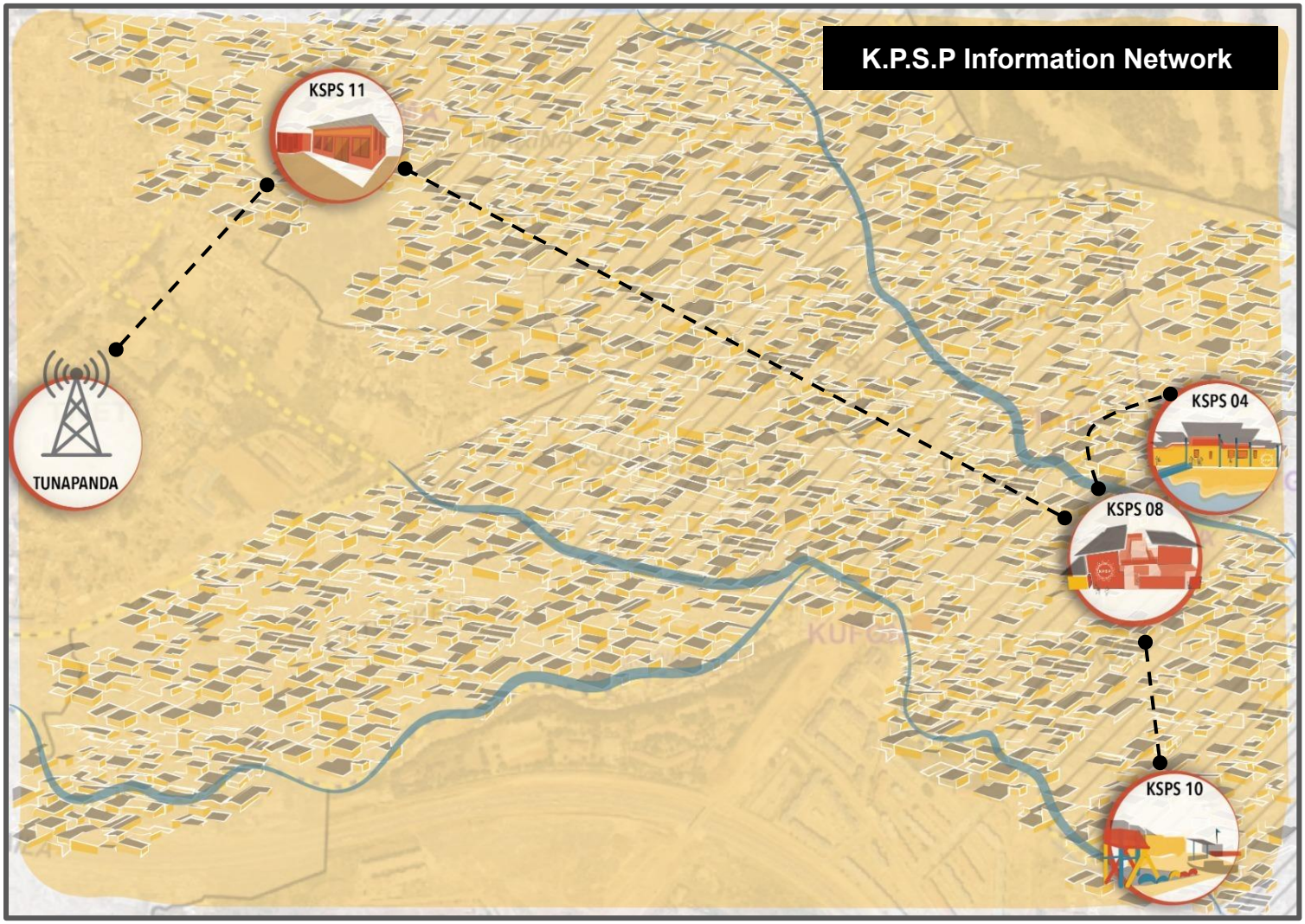


CBO Networks Tell A Story

Training

DAY 1

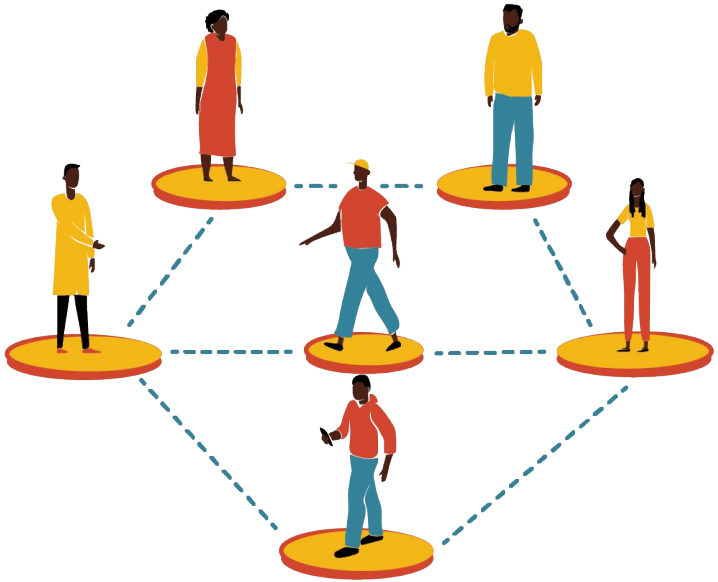


I

What is a Network?

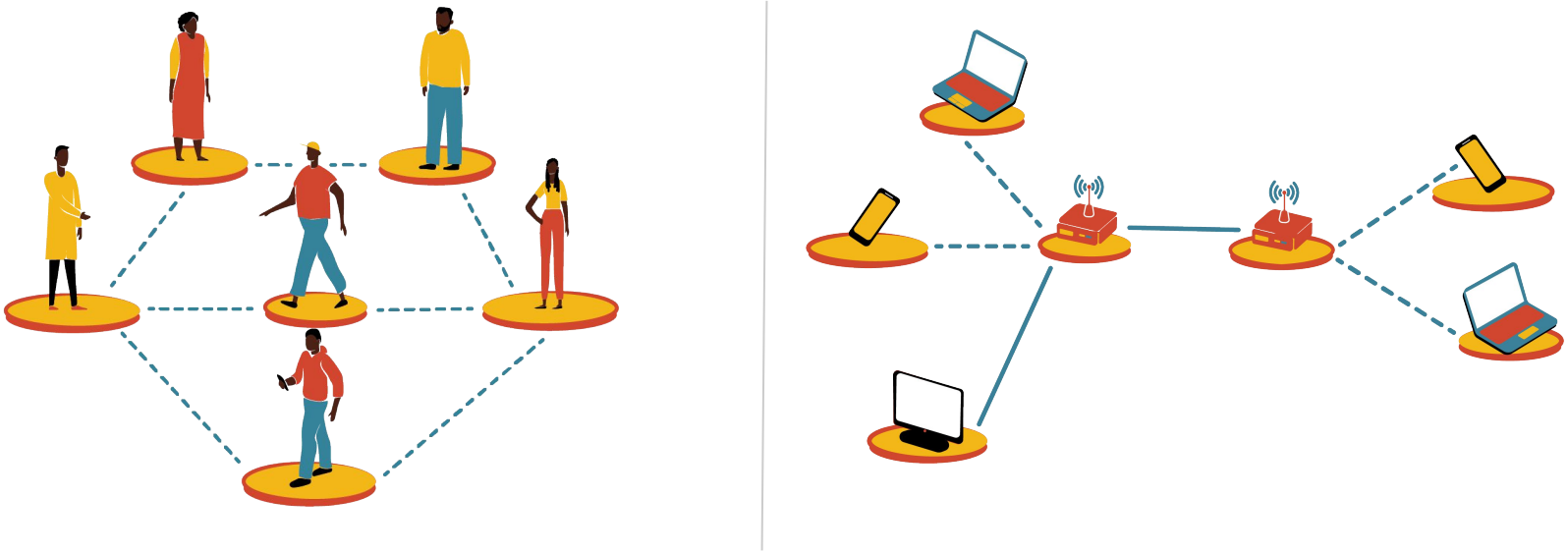
I. What is a Network?

Figure 1: Social network



- Role and responsibilities
- Language they speak
- Trust and relationships
- Modes & rules for communications
- Barriers to communication

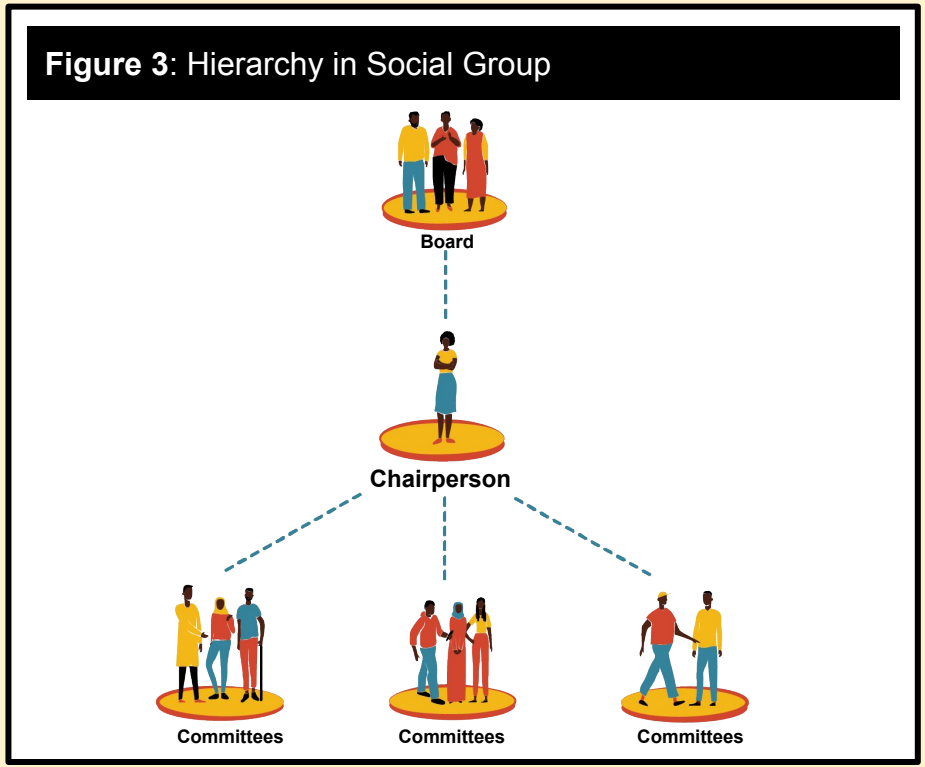
Figure 2: Social and Computer Networks



Social networks connect **people**

Computer networks connect **devices**

I. What is a Network | Roles and Responsibilities



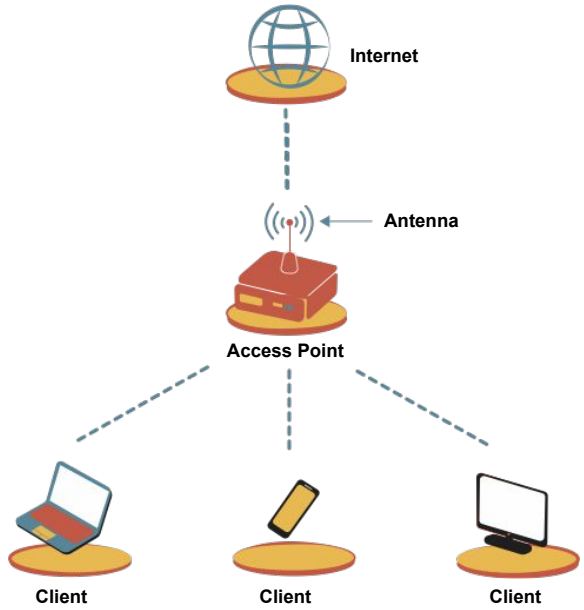
Chairperson:

- Manages the day to day.
- Accepts new members into the network.
- Keeps everyone safe and healthy

Committee Member

- participates in activities

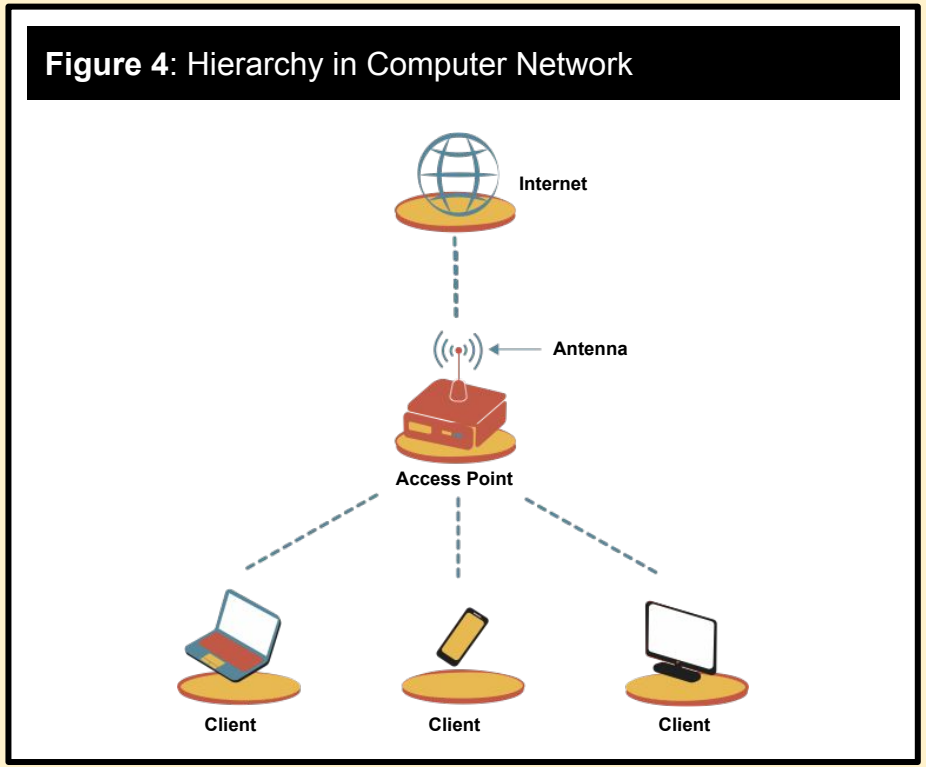
Figure 4: Hierarchy in Computer Network



Access Point:

- provides access to client.
- Ensures that only those that have access can join / use the network.
- Keeps clients safe and healthy

I. What is a Network | Roles and Responsibilities



Client: connects to an Access Point to gain access to the network

Antenna: allows devices to speak to each other over different distances.

Figure 5: Social Ties

It is difficult to build strong social ties when there are **differences in language**

Figure 5: Social Ties

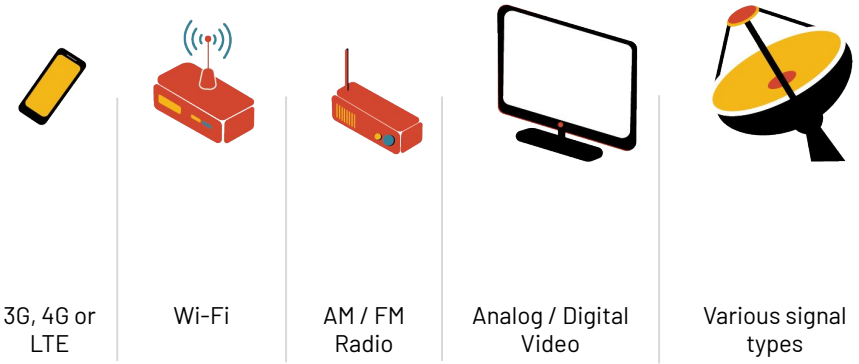
Many of our close friends speak the **same language** as us.

So we can **understand** them!

I. What is a Network | Language they speak

COMPUTER

Figure 6: Different devices languages



In Wifi networks, only devices that can speak and understand **wifi** are able to participate.

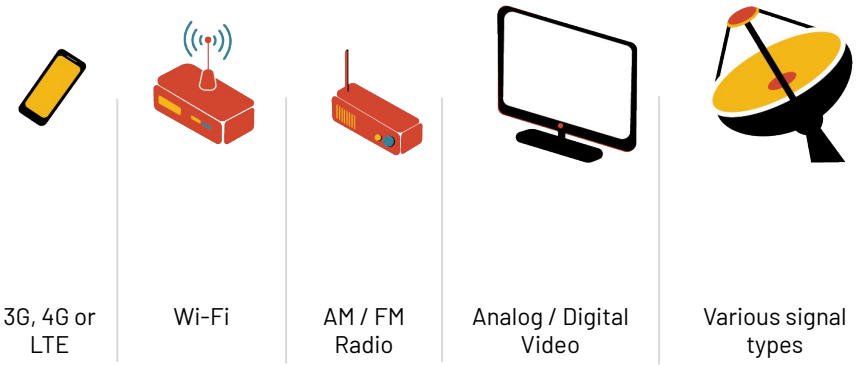
Your phone can speak wifi!

Some ‘smart tvs’ can speak wifi.

I. What is a Network | Language they speak

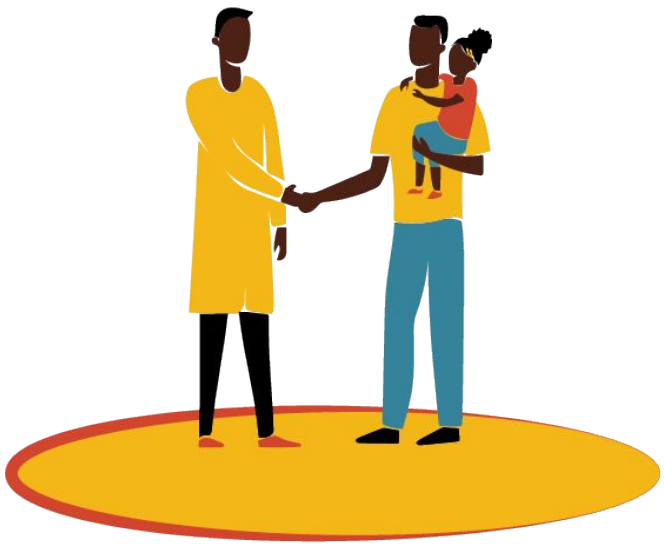
COMPUTER

Figure 6: Different devices languages



In the KPSPIN, **all the equipment that we are setting up speak wifi.**

Figure 7: Social links and relationships



Trust is very important for social ties.

If we can't trust each other is it very difficult to build strong social networks.

Figure 7: Social links and relationships

Our existing relationships help us **build new friendships** with strangers and expand our network.

Figure 8: Device to Device trust

If devices on a computer network cannot trust each other, then no **communication will be able to happen**.

Figure 8: Device to Device trust

We use **passwords** as a way of allowing devices that we don't know to use and access our network.

Figure 8: Device to Device trust

when we give a password to someone to access the internet, we are saying "***we trust you to do good things on the network***".

Figure 9: Social communication modes and rules

All groups have many ways they communicate:

- Email
- Face-to-face
- letters.

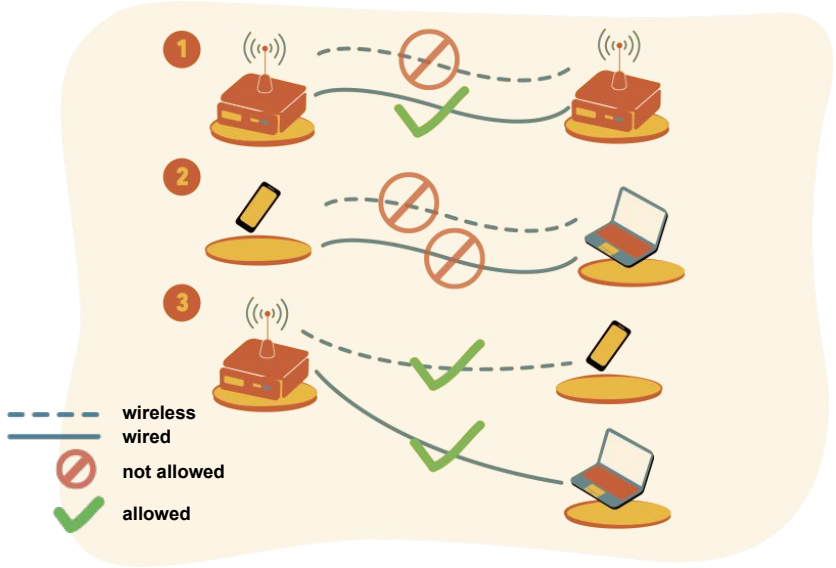
They also have rules they define who can and should speak to who.

Figure 9: Social communication modes and rules

For example, in big companies only the CEO or other executives can speak to the board.

At the home, children must always speak to elders with respect.

Figure 10: Device communication modes and rules

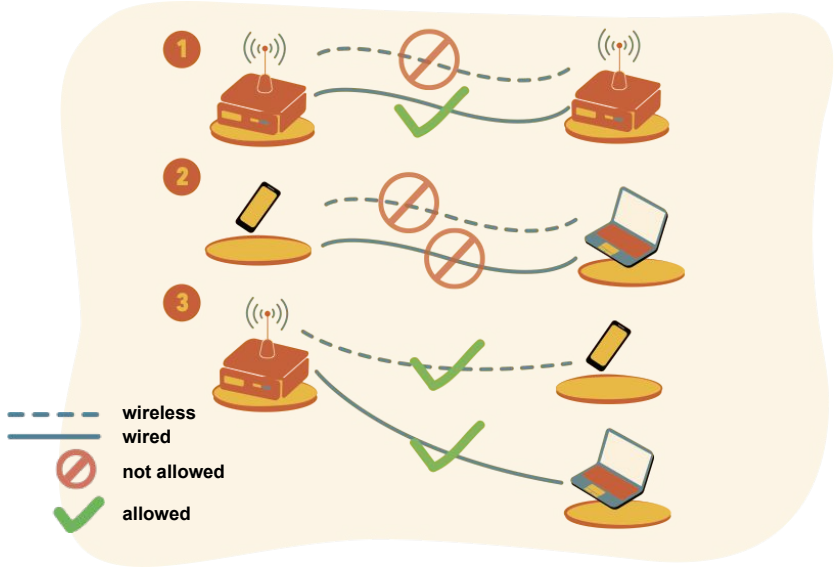


Devices in a computer network can communicate in two ways:

wired or **wireless** connection

Also depending on the role, only certain connections are possible. Here are three rules:

Figure 10: Device communication modes and rules



1. **Access Points** can only connect over a wired connection
2. **Clients** don't speak to each other directly (they use Access Points to communicate)
3. **Access Points** and **Clients** can connect over a wireless or wired connection

Figure 11: Barriers to social communication

In social groups, big and small there are many factors that make communication difficult.

- governance issue
- age difference
- different languages
- distance

Figure 11: Barriers to social communication

It is important to identify these factors and manage them to make sure the social network is strong

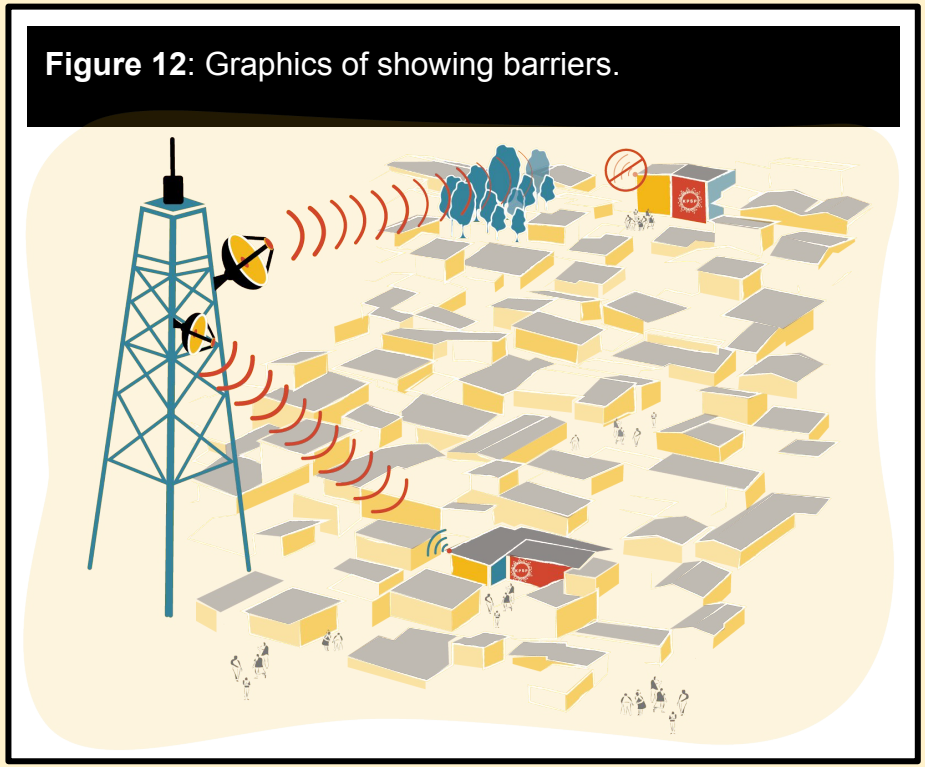


Figure 12: Graphics of showing barriers.

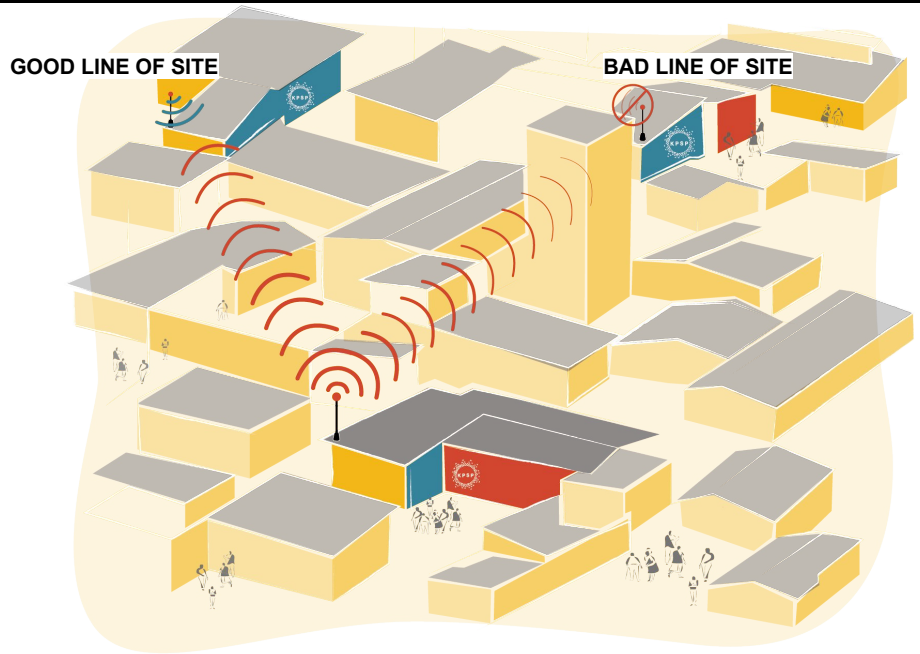
The same is true of computer network. Here are some barriers:

1. Line of sight
2. Weather
3. Power
4. Interference
5. Distance

I. What is a Network | Barriers to communication

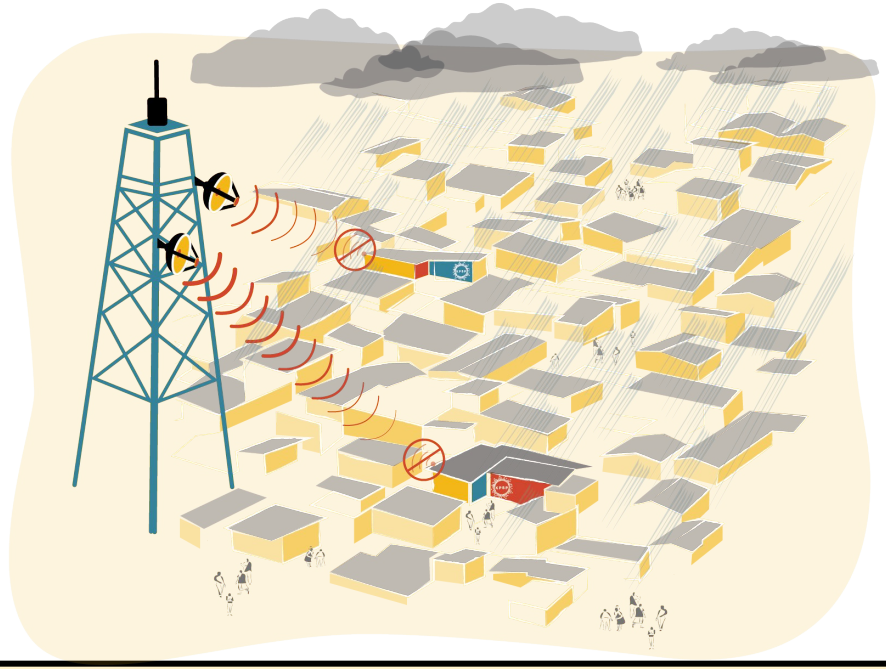
COMPUTER

Barrier 1: Line of Site



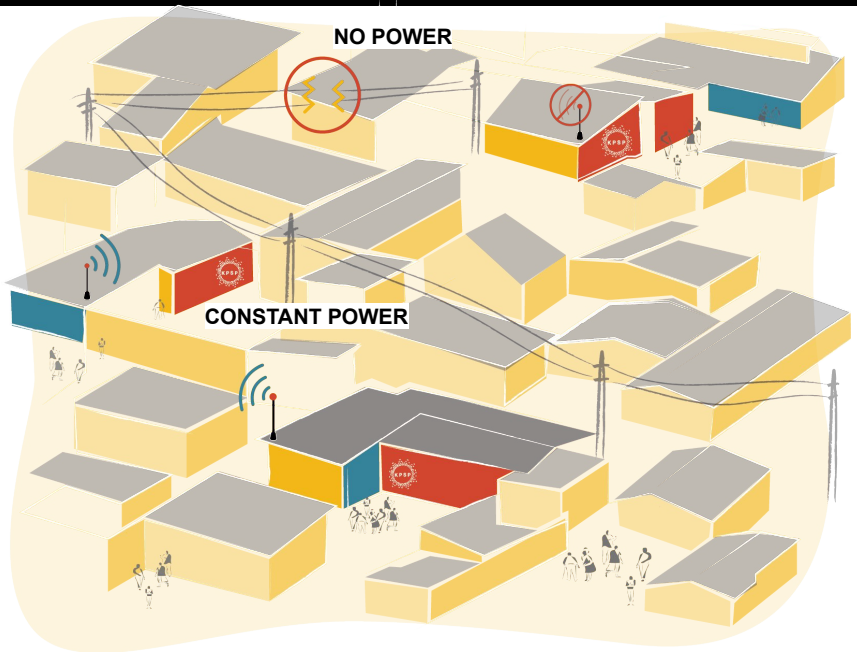
Devices must be able to have an unobstructed view from one to the other

Barrier 2: Weather



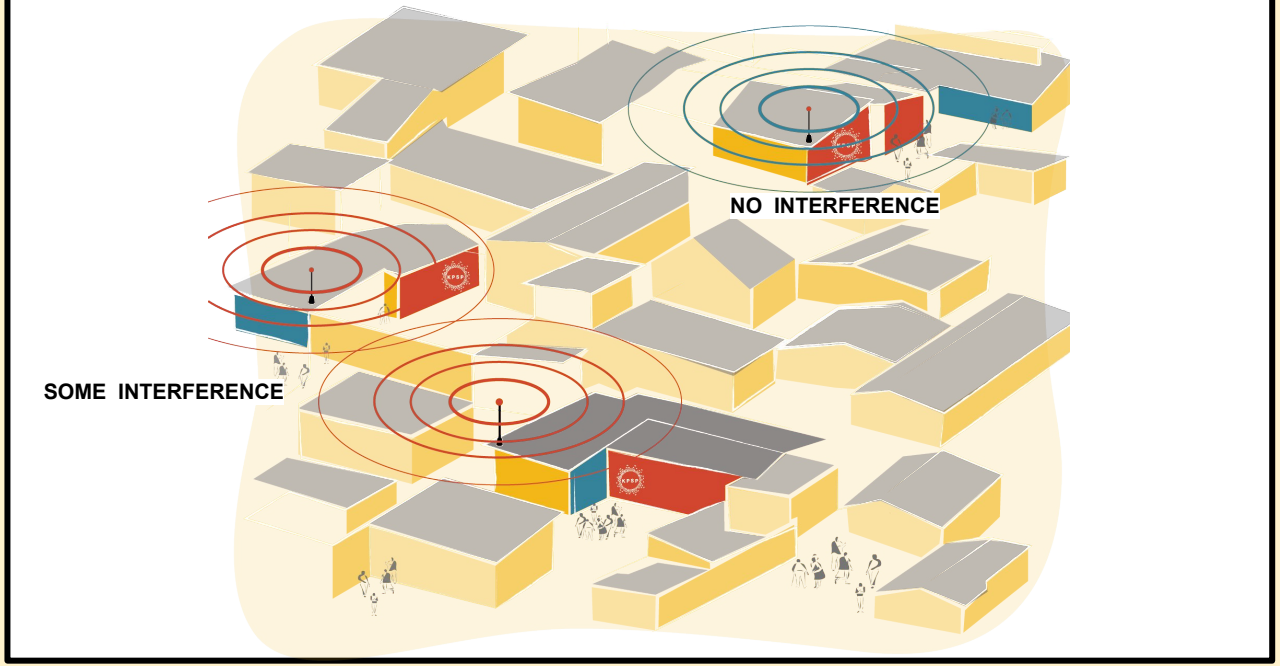
Rain can interfere with communication between devices, especially when the network is badly designed

Barrier 3: Power



The equipment will not work if there is no power supplied.

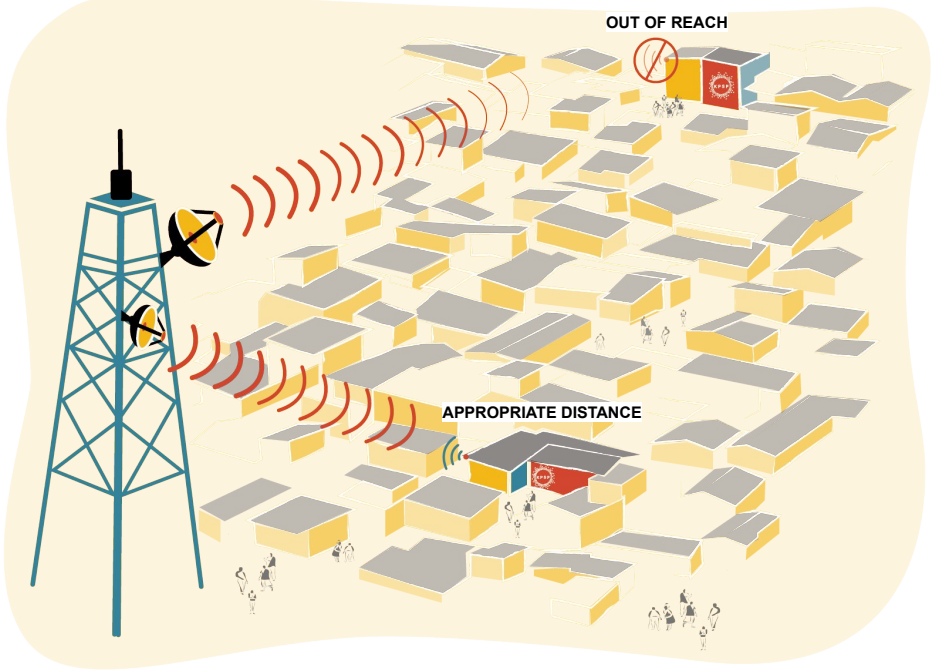
Barrier 4: Interference



Devices can still communicate with little interference.

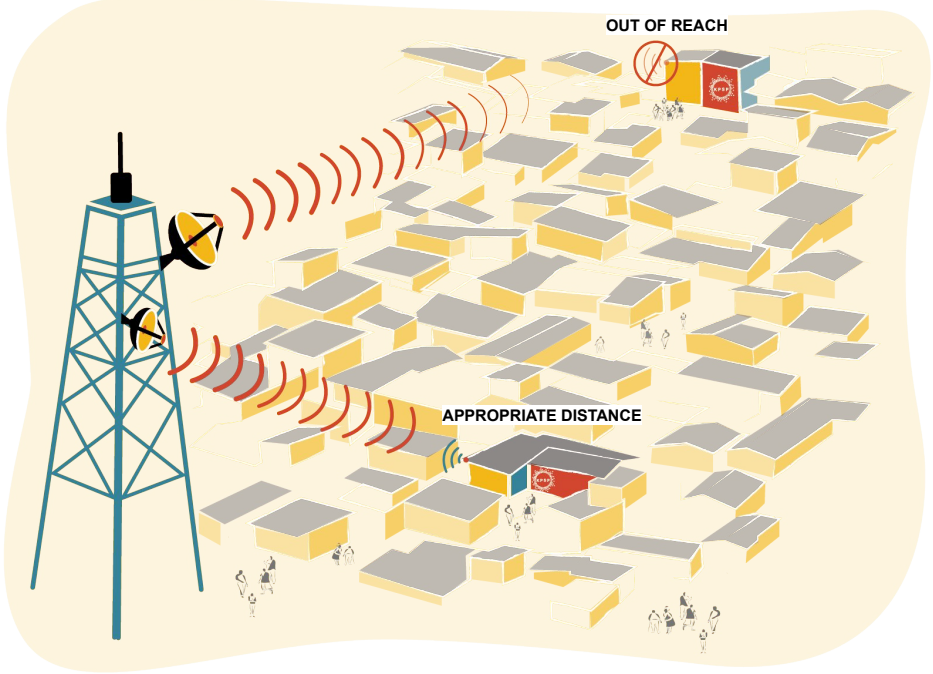
With a lot of interference, the devices get really confused!

Barrier 5: Distance

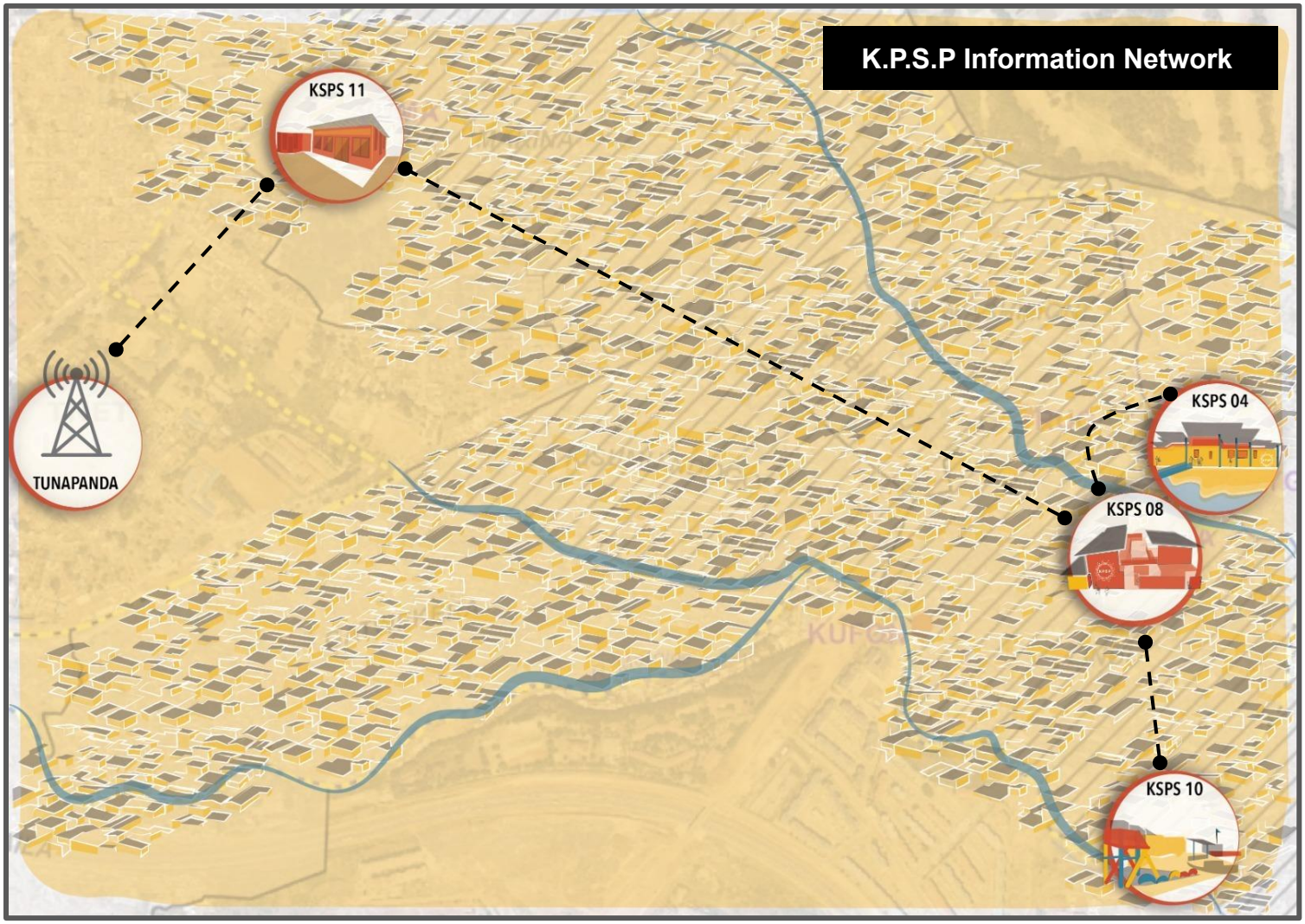


Devices usually can’t communicate over very long distances.

Barrier 5: Distance



In order to allow devices to communicate over long distance, we need to give them better antennas!



II

Building & Managing

II. Building & Managing

Figure 14: Building a social network

Social networks start when people of shared interest come together for a common purpose. **Communication, trust** and **clear roles** and **responsibilities** allow them to grow.

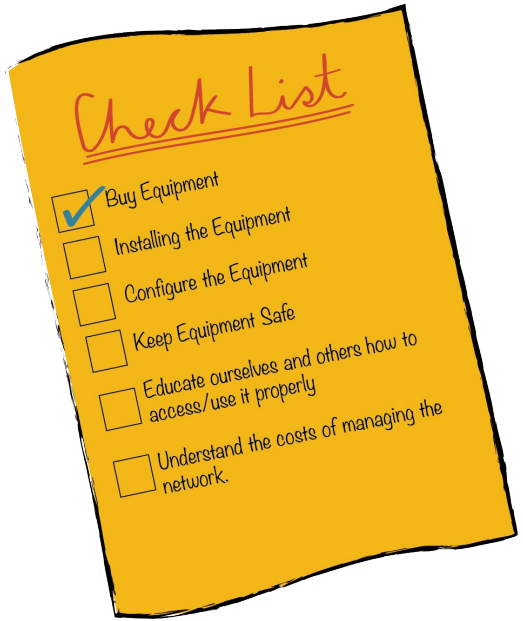
II. Building & Managing

Figure 14: Building a social network

To maintain relationships, we check in with our friends often: “**hi, how are you**?” or we attend events with the group.

II. Building & Managing

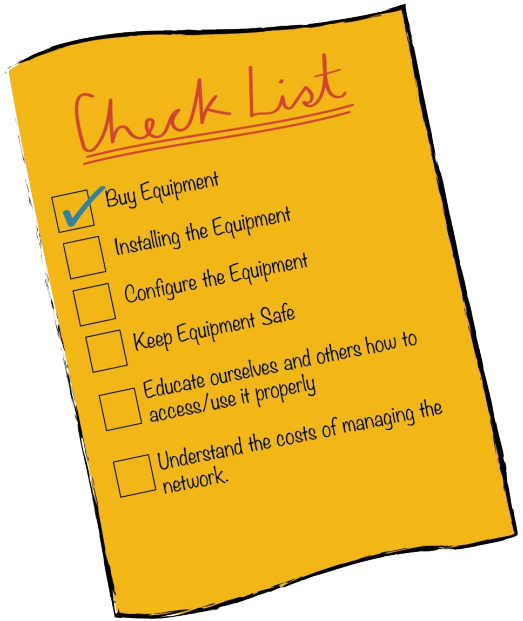
Figure 14: Graphics of checklist for the following steps



Computer networks also require a lot of **care** and **maintenance**. To build a computer network here is some of what we need to do:

II. Building & Managing

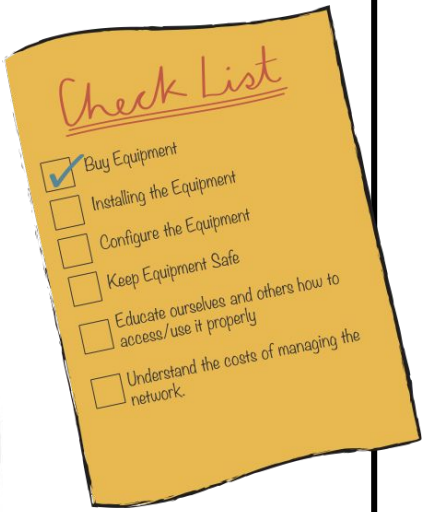
Figure 14: Graphics of checklist for the following steps



1. Buy Equipment
2. Installing the Equipment
3. Configure the Equipment
4. Keep Equipment Safe
5. Educate ourselves and others how to access/use it properly
6. Understand the costs of managing the network.

II. Building & Managing | Aspects of managing networks

Aspect 1: Buy Equipment



- You don't have to worry about this as TN has done this for you.
- If you were doing this yourself, it is important that you get the right equipment for your space.

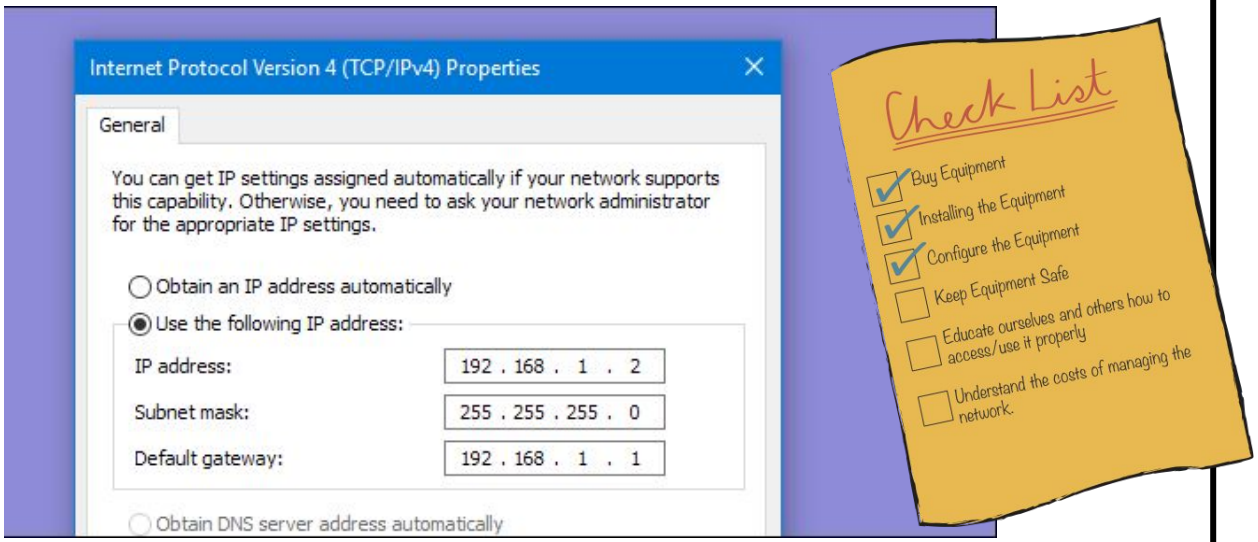
II. Building & Managing | Aspects of managing networks

COMPUTER

Aspect 2: Installing the Equipment

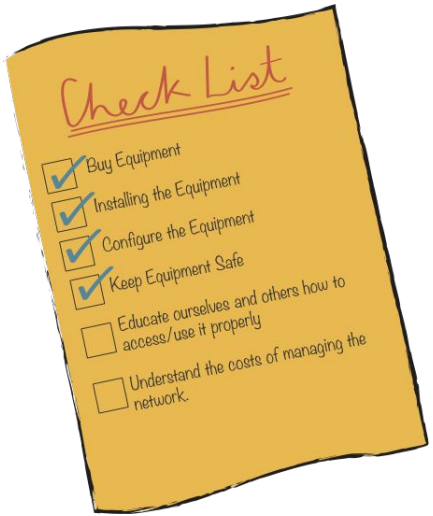
- First the masts need to go up
- Antenna is attached to mast
- Ethernet cord from antenna to router
- Ethernet connection to power source

Aspect 3: Configure the Equipment



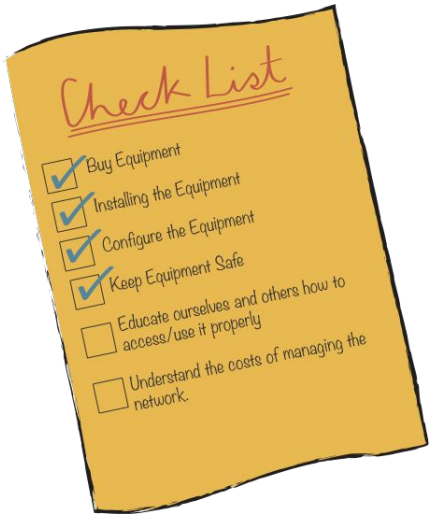
- Power on the router
- Set the correct information
- Set the network name. For example, ‘ANWA.KPSPIN’
- Set the password
- Open the network to the public!

Aspect 4: Keep Equipment Safe



Make sure the equipment is **only access by those with the responsibility of managing it.**

Aspect 4: Keep Equipment Safe



Always keep the equipment **in the condition + position it was placed during installing.**

II. Building & Managing | Aspects of managing networks

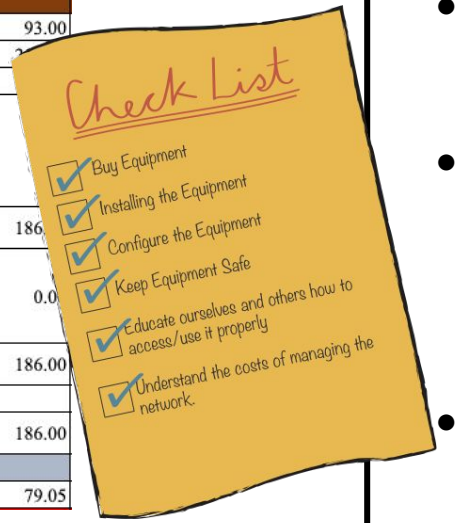
COMPUTER

Aspect 5: Education on Proper Access and Use

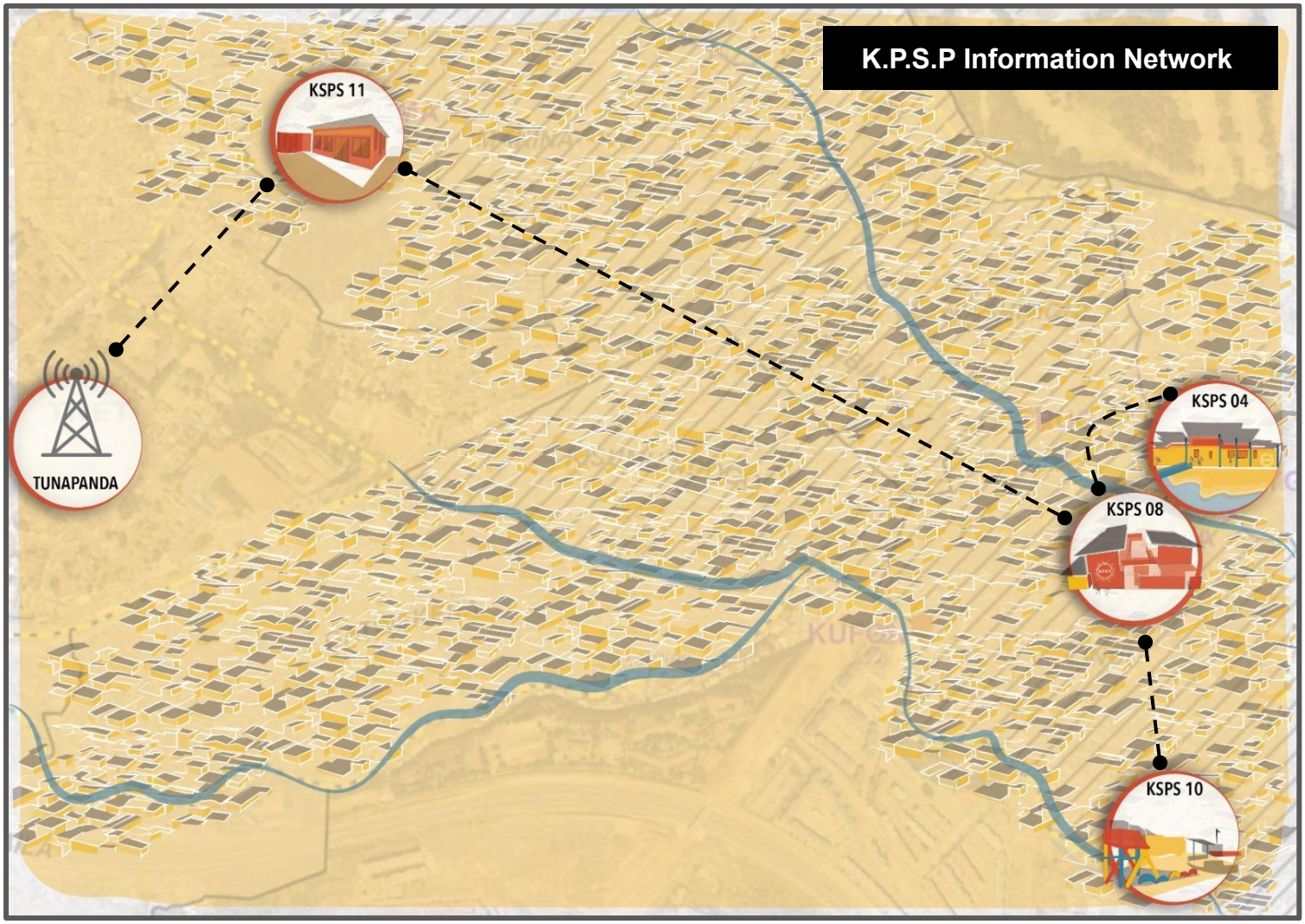
- Make sure passwords are given out in an appropriate manner
- Ensure that the internet is use for non-malicious purposes
- Provide instruction to members and users on how to watch out for scams online.

Aspect 6: Understand the costs

NODES & EQUIPMENT							
CAT 6 Aico UTP Ethernet/LAN Cable			1	10000.00	93.00	10000.00	93.00
Ubiquiti Networks TOUGHCable Outdoor Ethernet Cable			1	23000.00	213.90	23000.00	
Masts and Fubrication of masts			5	2500.00	23.25	12500.00	
High Point 1 - ANWAR ACADEMY					0.00	0.00	
Ubiquiti airMAX PowerBeam AC Gen2, 5 Ghz, Bridge	PBE-5A		1	20000.00	186.00	20000.00	186
High Point 3 - Makina (VUMA)					0.00	0.00	0.0
Ubiquiti airMAX PowerBeam AC Gen2, 5 Ghz, Bridge	PBE-5A		1	20000.00	186.00	20000.00	186.00
High Point 3 - St. Christine							
Ubiquiti airMAX PowerBeam AC Gen2, 5 Ghz, Bridge	PBE-5A		1	20000.00	186.00	20000.00	186.00
ANWAR SCHOOL						0.00	
Ubiquiti litebeam AC grid	LBE-5A		1	8500.00	79.05	8500.00	79.05



- The access you are receiving will not always be free.
- Make sure your members understand the costs of operating and managing the KPSPIN
- Include this in your ideas for business models.

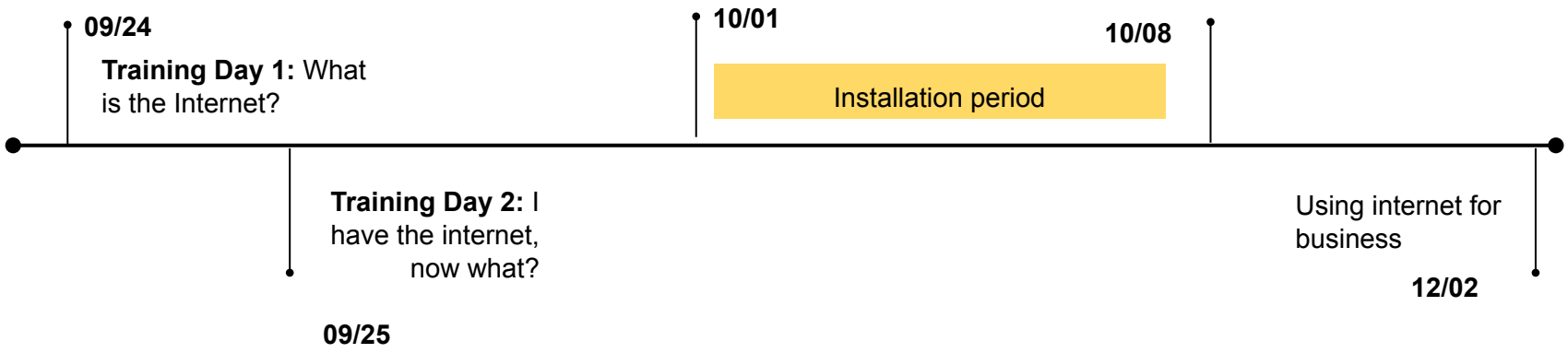


III

Next Steps

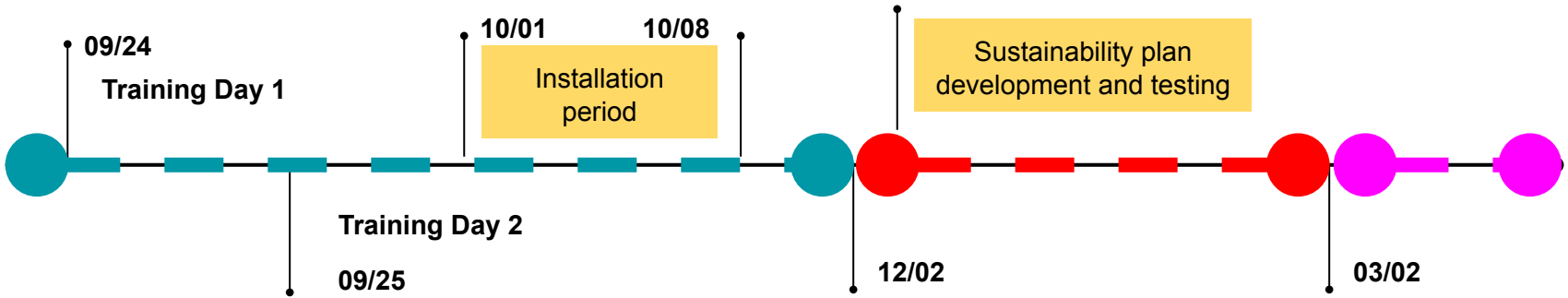
III. Next Steps

Figure 15: 4 Month timeline



III. Next Steps | Scope for Internet Provisioning

Figure 18: Timeline for Sustainability/Business Plan Development



Network general use and testing. No profit generating models implemented

Experimentation with different models. Learn of different mechanisms to generate revenue. Exploring cybercafe

End of pilot phase. CBO can continue with KENET/TN or explore other method profit generations.

III. Next Steps | You have internet access now what?

Figure 16: Day 2 Agenda

A. Day 1 - Review & Questions
B. Understanding and Assigning the KPSPIN Roles (Techie, Handyperson, Organizer)
C. Issues you will need to decide on together about use.
D. Sustaining the KPSPIN
E. Sign-up for Installation Date

- We will be discussing topics related to the governance and maintenance of the KPSPIN in your site

Questions for KDI and TNET

KDI and TUNAPANDA

i. Tunapanda - Whether Ndovu and Usalama groups be using the same access point? How do they make sure they are independent control?
ii. How is the governance going to work for the shared site Ndovu and Usalama? Do we plan for independent control? Which would mean an additional access point.
iii. How can we help them get as Ndovu techie support KDI do you provide? If the women need a techie how to we make sure they get that.

Issues about techie
* do you want training
    If yes..KDI
    (provide a training - with assistance from tunapanda)
    If no..

- do you want training
  If yes.. KDI

III. Next Steps | Preparing for Day 2

Figure 17: CBO Checklist

1. Who is the Hardware + Techie?
2. Who is the main lead in your CBO for the network?
3. Who makes sure the equipment is turned on?
4. Who manages access to the internet in your site?
5. Who can have access? What they can have access to?
6. What type of uses do you want to allow?
7. Do you have access to a legal power source?
8. Who is in charge of the safety of the equipment?

1. Mock demo on training september 17th
2. Agree on training date of september 24th +25th
    a. Overview decide on
3. Site Configuration Training - mock done Sept 21st.
4. What we want to do about ABC
    a. Location for housing the equipment.
5. Installation first two weeks of october
    a. Sept 29th (site 1)
    b. October 1 (site 2)
    c. October 6th (site 3)
    d. October 8th (site 4)
6. October 15 - Planning your business.

Sept 24th
What is
Internet

Sept 25th
I have the
Internet
now what?

(Interim
Use
Guidelines
Standards
of Practice

Installation

Using the Internet
for our Business

I have the Internet now what? (training day 2)

Create rules of use.

Who to people get on.

Do you limit the amount users can access..

NEXT Installation

1. For the installation you need to know (paper handout)
    a. Who Hardware + Techie (do we need to provide)
    b. Who is the main lead in your CBO for the network? Contacting other CBOs and Tunpanda about problems.
    c. Who make sure the equipment is turned on?
    d. Who manages access to the internet in your site? Who can have access? What they can have access to? What they can use it for. Passwords etc
    e. Verify legal access to electricity.
    f. Who ensures the safety?
        i. physical

I have the internet now what ?

Rules for use until business is created..

Do I tell people in my community about it?

Promote its use..

Can people use it for video?

Sustaining the Project

Sustaining

i.
ii. What can you use the internet for now.
iii. What can you ise the internet for in the future.
iv. How to decide the type of internet use you want.
v. Can data sustain the internet services.

* Timeline representing the process around non-profit/for-profit

- Internet is for not-for profit

Month 0