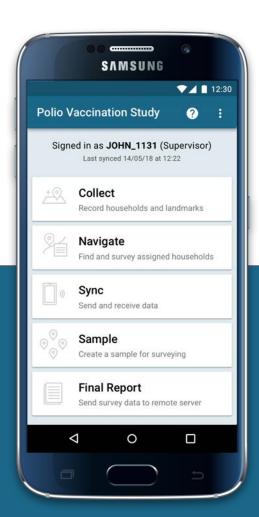


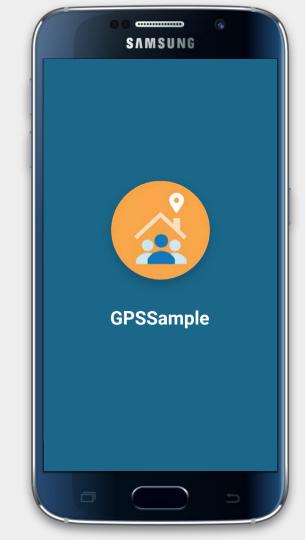
### **GPSSample**

## **Supervisor Guide**

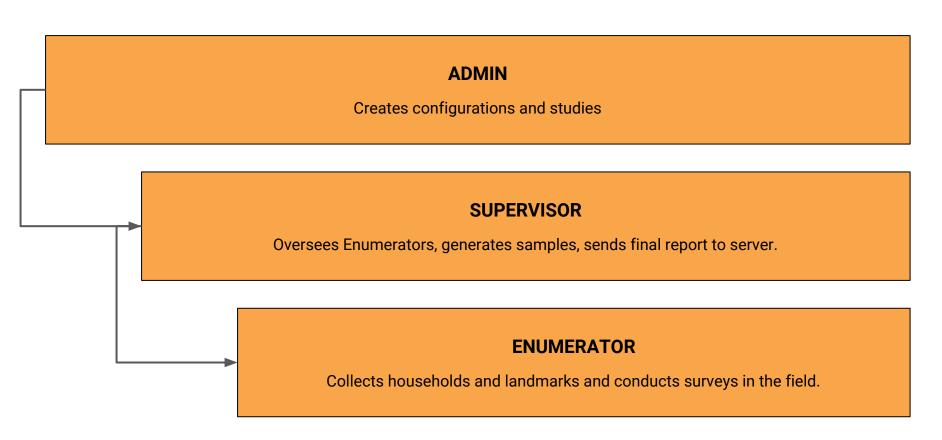


# What Is GPSSample?

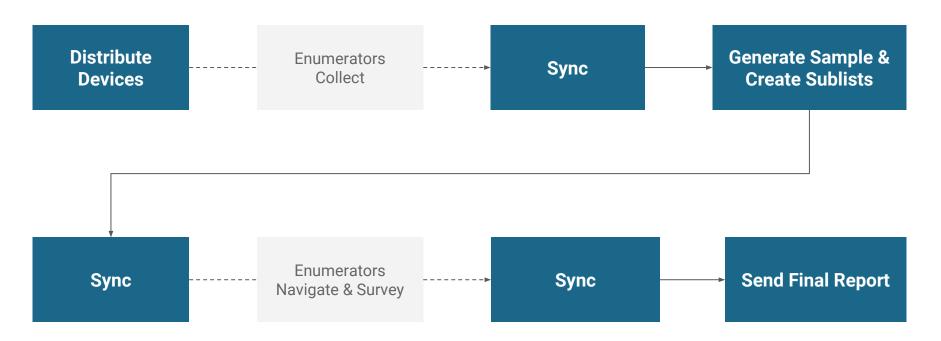
GPSSample lets your team record location-based information and generate statistical samples from it.



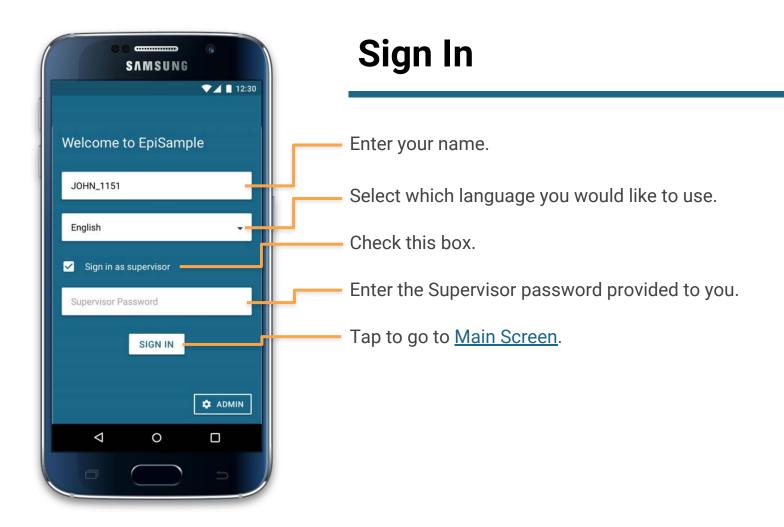
### **User Roles in GPSSample**

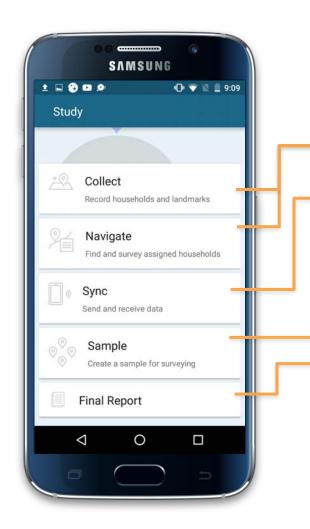


### **Study Workflow**



# **Getting Started**





#### **Main Screen**

**Collect** and **Navigate** are Enumerator functions

**Sync:** The last part of the study, during which you will go to a selected list of households and conduct surveys. <u>Learn more.</u>

**Sample:** Where you go once you have re-joined your team and Supervisor so that the Supervisor can download your work. Learn more.

**Final Report:** After after your team has completed surveying and the study is finished, you go here to upload your work to Google Drive for the study administrator. You must be connected to Wifi.

#### Part 1: Collect

If you are participating in collection with your Enumerators, alk around your assigned area and record every household. You can also record important landmarks that will help you find households later.



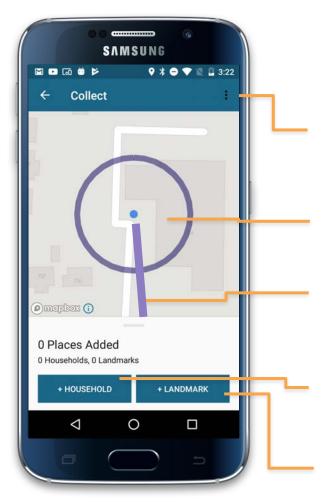
### **Households vs Landmarks**

#### Households

Your job is to record every household in the area you were assigned. After your team has finished collecting all households, a few of the households will be selected for people to return to and ask questions in a survey. It is very important that you record all households properly. Even if you cannot give all the information you need about a household, you should still record it and save it as incomplete. Households are represented on the map by blue pins. Incomplete households are represented by red pins with a flag inside.

#### Landmarks

Landmarks are places that help you know where you are, like an important building or distinctive tree. Landmarks do not all need to be recorded, but it is good to add several as you collect households because it will help the person who comes after you find their way around. Landmarks are represented on the map by orange pins with different icons for different types.



#### Collect

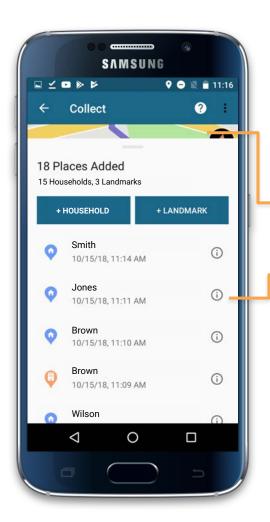
Tap here for additional options: snap the map to your current location, turn off breadcrumbs on the map, and toggle other map layers (like streets).

The blue dot is your current location. The purple circle represents the precision of the GPS in reading your location.

The purple line represents **breadcrumbs** -- the path you have already travelled.

Press <u>+ Household</u> when you have arrived in front of a household you want to collect.

Press <u>+ Landmark</u> when you have arrived in front of a landmark you want to collect.

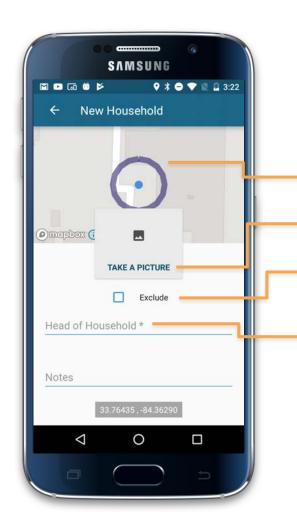


#### Collect

Scroll down on the white card to reveal the list of places you've collected, with the most recent record at the top.

To get back to the map, just pull the white card down to the bottom of the screen again.

Tap the information icon to view the details of the place



#### COLLECT

### **New Household**

You can see this screen when you tap "+ Household".

The location on the map of the point you are recording.

Tap here to open the camera and capture a photo

Tap here to manually exclude the point from sampling. Only do this if a Supervisor instructs you to do so.

Fill out the fields. Fields with an \* after them are required.



#### COLLECT

### **New Household**

You can see this screen when you tap "+ Household".

The numbers here represent the current GPS coordinates.

You want the GPS to be green, and the number to be as low as possible.

Tap here to use last recorded GPS, if this is not the first household of the collection. <u>See further instructions on cloning GPS.</u>

If the GPS signal precision is not good, the app may make you wait up to 2 minutes to save the point. Walk around to try to get a better GPS signal.

#### **GPS Precision**

#### What Is GPS Precision?

GPS location recording is never completely accurate, and the GPS precision tells you how accurately GPSSample can understand the location you're recording.

#### **GPS Grades in Collection**

- You should try to make your GPS **good** every time.
- Fair
  If your GPS is fair, you should try to get a better GPS location. GPSSample will make you wait for two minutes before you can save to try to get a better location. If you cannot get a better GPS location after two minutes of trying, you should save the form and move on.
- Poor
  If your GPS is poor, it is very important that you try to get a better GPS location. GPSSample will make you wait for two minutes before you can save to try to get a better location. If you cannot get a better GPS location after two minutes of trying, you should save the form and move on.

### **Getting a Better GPS Location**

#### How Do I Improve GPS Accuracy?

There are a few things you can do to get a better GPS location:

- If you are inside a building, walk outside
- Walk out from under any trees or any other overhead obstacles
- Walk around the area
- Wait for two minutes

You will generally get the best GPS location when you are in a place where you can see as much of the sky as possible.

### **Using Last Recorded GPS (Cloning)**

#### What does "Use Last Recorded GPS" do?

Normally, a new GPS location is recorded every time you open the "New Household" form. "Use Last Recorded GPS" instead uses the GPS location of the last household you recorded. (You must have at least one household recorded.)

#### When Do I "Use Last Recorded GPS"?

You should "Use Last Recorded GPS" for multi-household dwellings, where it is hard to take a good GPS location inside the building. The first household in the building needs to record a GPS location, so when you arrive at the building, open the "New Household" form while standing outside (but still close). Wait for the GPS Precision to turn to three green dots (walk around if you need to), then enter the building and collect information on the first household. Save the form, and when you open the form for the next household, tap "Use Last Recorded GPS". You will see a lock icon appear beside the gray GPS coordinates. Do this for as many households as are in the building. **Do not use last recorded GPS if you are going to different buildings.** 

### **Household Status**

#### What is the household status?

In Collect, households can have three different statuses.

#### Normal

Normal households do not have any kind of special badge. Most of your households should be normal.

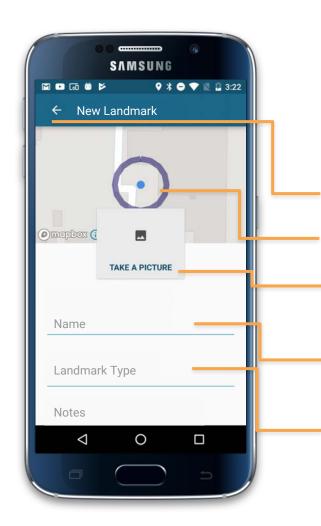
#### Incomplete

Incomplete households do not have all the information they need in the form to be complete. You should return to these households and complete the forms before you review at the end of the day. Incomplete households have a red badge: INCOMPLETE

#### Excluded

Excluded households are complete but will not be included in the sample.

They have a gray badge: EXCLUDED



#### COLLECT

### **New Landmark**

You see this when you tap "+ Landmark" on the Collect screen. Open this form once you are directly in front of the landmark.

Tap this button to close the form without saving.

Location where the landmark will be recorded

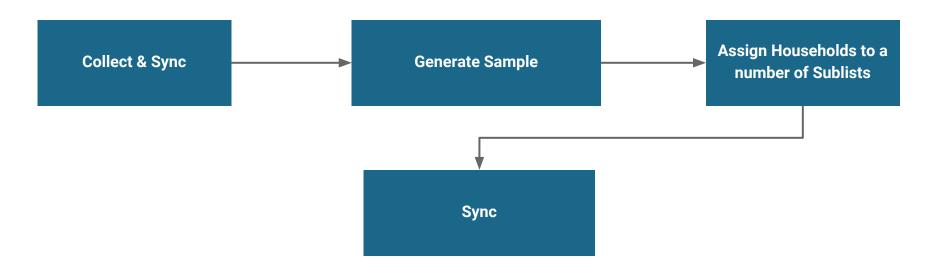
Tap "Take a Picture" to open the camera and add a photo to help you identify this place later.

Name the landmark. This is the name that will show up on the list and when you tap the pin on the map later on.

Choose which type of landmark this is. It doesn't have to be precisely accurate, just close enough to be helpful.

### Part 2: Sample

After you have synced with your Enumerators following the collection process, go to "Sample" on the Main screen to automatically generate a sample of households for surveying. Then, you can create sublists of sample households to assign to individual Enumerators at sync.



### **Sampling Terminology**

#### Valid Households

Households recorded during collection that are complete and have a good GPS precision. These are the only households that will be considered by GPSSample for inclusion in the sample.

#### Sample

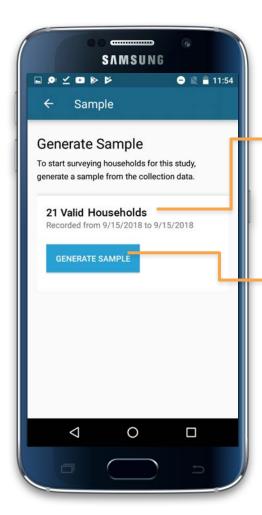
The set of households randomly selected by GPSSample from the pool of all valid households. The rules that GPSSample uses to select these households are determined by the admin during configuration. All you have to do is tap the button to create the sample.

#### Subset

The groups of households, configured by the admin before the study, that make up your sample for surveying. There may be more than one subset in your sample.

#### **Sublist/Navigation Plan**

The collections of households that you create after generating your sample. Navigation Plans exist so that you can assign small groups of households to each Enumerator to survey.



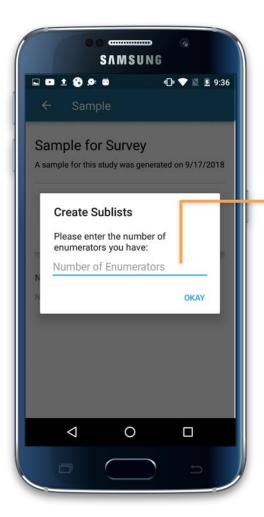
#### **SAMPLE**

### **Generate Sample**

The total number of valid households recorded by your Enumerators during collection. If this number seems incorrect, it could mean that you didn't sync with all Enumerators or that many of the households collected were invalid (either incomplete or had poor GPS).

Tap this button to instantly generate a sample from the collection of valid households.

You may see red text saying that you have "Insufficient Collection Data". This means that you did not collect enough valid households to be able to generate a full sample, according to the rules set up by your administrator. You can still generate a sample, but you should make sure that your Enumerators collected all the households in their assigned enumeration areas, and that you have synced with all Enumerators since collection.

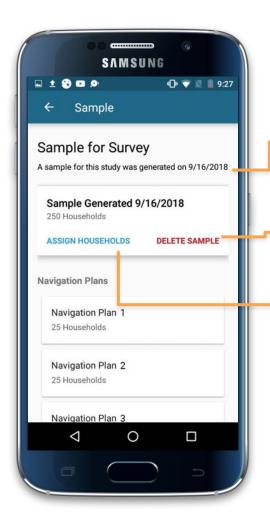


#### **SAMPLE**

### **Create Sample Sublists**

Sample sublists let you split up the work of surveying among your enumerators. Enter the number of enumerators; if your enumerators are working together in groups, enter the number of groups. GPSSample will split up the sample into this number of Navigation Plans.

When you sync out the sample to your enumerators, be sure to tell them which navigation plan they should use.



#### **SAMPLE**

### Sample Generated

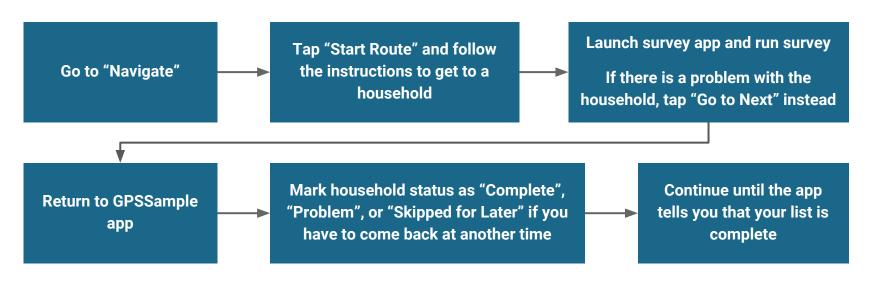
The date the sample was generated and the number of households in the sample.

If you wish to generate a new sample (for example, because you have synced new collection data), you must first tap here to delete the existing sample and start over.

Tap "Assign Households" to delete and re-create the sublists for Enumerators. This will not delete your sample.

### Part 3: Navigate

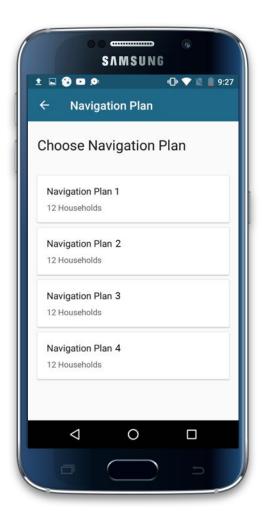
Go to each household in a list that has been assigned to you. Once you've arrived at a household, conduct a survey, mark the household as complete, and go to the next one on the list until you've finished the list.



### Sync

Syncing transfers Enumerators' work to your device while also sending a backup of the entire project to the Enumerator's device. This is also your opportunity to enable or disable photos on Enumerator devices and (after generating a sample) assign sample sublists to Enumerators.

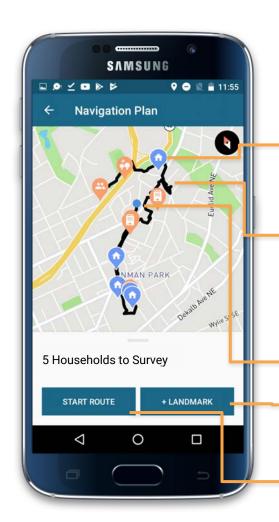




### **Navigation Plan**

Your Supervisor will assign you a specific navigation plan. Remember what it is so that you can select it when you go in to begin surveying.

Do not switch your navigation plan without instructions from your Supervisor.



### **Navigation Plan**

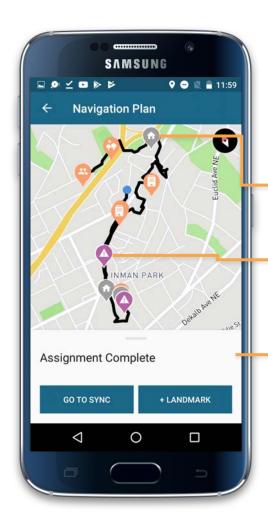
Blue pins represent households for you to visit. Orange pins represent landmarks to help you find your way around. Tap pins to preview them

The black line is a suggested route for getting to all the households on your list. It is not always the fastest path to take, but it is a path that is unobstructed. You do not have to use the suggested path as long as you get to the household.

The blue dot represents your current location.

Press "+ Landmark" to add a landmark at any point. New households cannot be added, but landmarks can.

Press "Start Route" when you are ready to start navigating to the first household



### **Navigation Plan**

You see this when you've already completed all households in the list.

Gray pins are households that have been visited already and marked either "Complete" or "Problem".

Purple pins are households that have been marked "Skipped for Later". You should return to these households. To change them to complete, go to the household details from the list.

Scroll down to the list to show all households, including those already surveyed or marked as "Problem" and "Skipped for Later". You can see the Household Survey Status in the list as well as on the pins. Tap a list item to see the household details.

### **Household Survey Status**

What is the household survey status?

In Navigate, households can have four different statuses.





#### **Awaiting Survey**

No status has been set on these households yet.





#### Complete

Navigated to household and successfully completed survey.





#### **Skipped for Later**

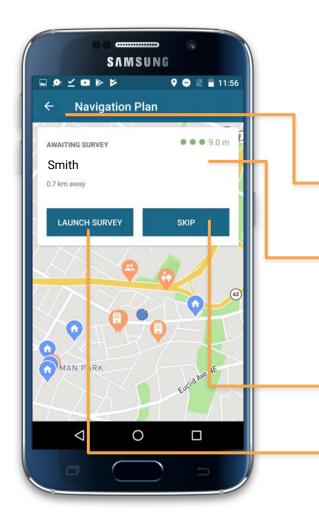
Navigated to household but could not complete survey. Need to return later.





#### Incomplete

Navigated to household but could not complete survey. Returning later is not an option.



### **Navigate to Household**

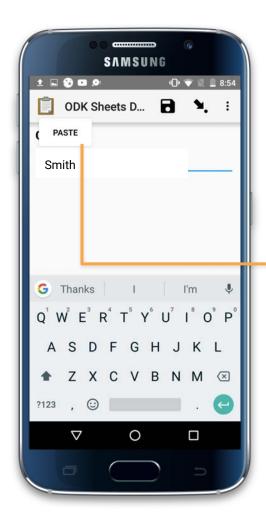
You see this when you've tapped "Start Route" in the Navigation Plan.

Tap here to close Navigation. You can resume navigation later where you left off.

The preview box shows you the information about the household you will arrive at, including how far away it is. If there is a photo, tap it to make it larger. Notes can also help you identify the household.

Tap "Skip" only if you arrive at the household and there is a problem that makes completing the survey impossible.

Tap "Launch Survey" when you have arrived at the household.



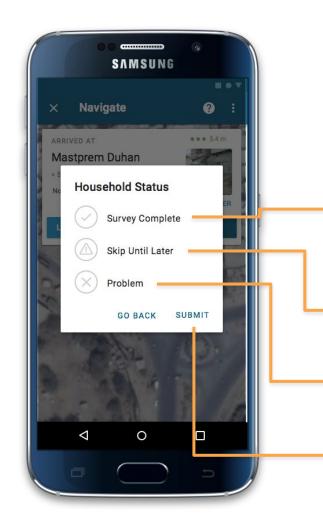
### **Completing the Survey**

You see this when you've tapped "Start Route" in the Navigation Plan.

When you Launch the survey, you will be taken to another app called ODK Collect to complete the survey that is part of the study.

A long ID of random numbers, letters, and dashes will be copied to the device clipboard. It is important that you paste this ID into the ODK Collect form.

To paste, tap into the textbox to activate the blinking blue line. Then, tap the box again but hold your finger down for one second. A small button will appear that says "Paste". Tap "paste". You should see the box fill with a value that looks close to "5bc6a075-d698-4153-9841-9cc2f1ef380b"



### **Navigate to Household**

You will see this when you return from the survey app, or when you tap "skip" during navigation. Learn about <u>household survey status</u>.

If you tapped "Skip" during navigation, you cannot mark the household as "Complete". You must mark the household as "Skip Until Later" or "Problem" and provide a reason.

"Skip until Later" should be used when you need to return later to complete the survey. You must provide a reason.

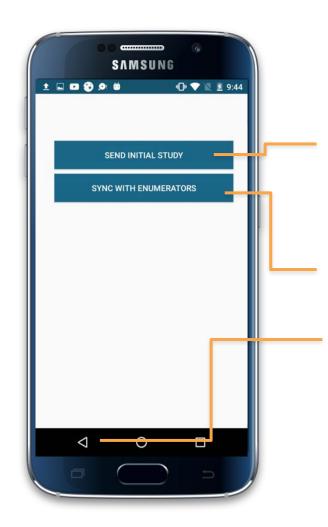
"Problem" should be used when you cannot complete the survey, even if you come back later. You must provide details.

When you tap "Submit", you will return to navigation to go to the next household and this household's survey status will be recorded.

### When to Sync

You should sync with your Enumerators at the end of every work day

- After they have collected new households or edited existing ones
- After they have collected new landmarks or edited existing ones
- Before beginning the navigation and survey phase of the study, to assign sublists from the sample
- After navigating and setting household survey status on any households
- Whenever you need to enable or disable photos on the Enumerator devices
- Whenever you need to back up work onto Enumerator devices

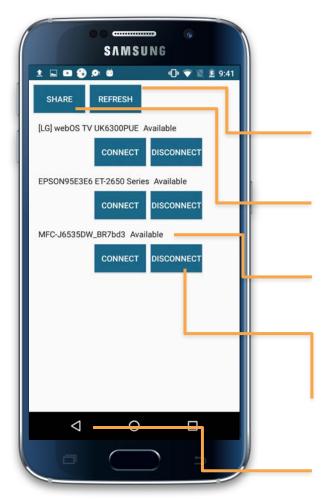


### Sync

Tap here to send the study to a new device which doesn't already have it installed. If you send the study to a new device, you must also run a normal sync after to send it the data collected so far.

Tap here to sync data from collection and navigation with enumerators.

Tap here to go back to the Main screen



### Sync

Refresh to see if new devices have come onto the Wifi Direct network.

Tap "Share" to sync data once you have successfully connected.

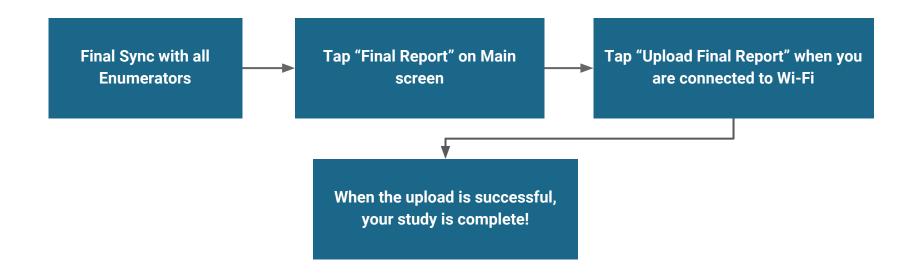
See the names of devices that you can connect with by tapping "Connect" under their names. Approve the warning that appears. You will then see a message that says "Connect Successful" or "Connect Failed" at the bottom of the screen.

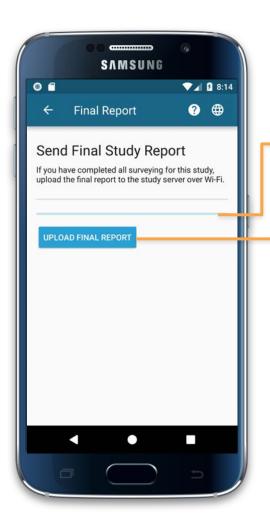
Tap "Disconnect" once you have completed a sync with one device. Then, you can connect and sync with the next device.

Tap here to return to the sync screen

### **Part 4: Send Final Report**

After after your team has completed surveying and the study is finished, you go here to upload your work to the server for the study administrator. You must be connected to Wifi.





### **Final Report**

When the bar is fully dark blue, the upload is finished. If the upload fails, you will see an error.

Tap here to open Google Drive and begin the upload. You must be connected to Wifi and be logged into Google Drive.

# Troubleshooting



### **GPSSample Has Stopped**

When you see the app close unexpectedly with the message "Unfortunately, GPSSample has stopped", tap "OK" and reopen the app.

Your work is still there, but if you were in the process of adding a household/landmark or completing a survey, you will need to repeat that action.

If this issue is occurring frequently, your phone is running out of working memory. Try closing out every other app in the background.

### **Changing Device Name on Network**

To change the device's name as it appears on the network for Wifi Direct syncing, go to the phone's Settings > WiFi > WiFi Direct, then tap the overflow menu in the top right corner and select "Rename Device".

### **How to Change Your Language**

GPSSample supports English, French, and Spanish. To change your language, go to your phones Settings > Language & Input and tap "Language". Change it to your preferred language.

If the language is one that GPSSample supports, GPSSample will translate automatically.