Title of template

**Skill level needed:**Basic/Intermediate/Advanced

**Sample designs supported:**

1, 2, 3, 4, 5, 6

Designing and Implementing Gridded Population Surveys

**gridpopsurvey.com**

**E4. Navigation – Avenza Maps**

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**Navigate offline within PSUs by visualizing the device location over a detailed interactive map**

## Example: Uganda

**Motivation:** Regardless of survey design or whether the survey was derived from a gridded population, teams that provide fieldworkers with a device will usually find value in an app that visualizes the device’s location on a detailed, interactive (OSM or imagery) base map while offline. This tool allows the fieldworker to navigate within the PSU, confirm when they have reached the PSU boundary, and/or locate specific assigned locations within the PSU.

**Example (Uganda – using GeoPDFs of each PSU):** In this example, the team has access to census enumeration area (EA) boundaries from the 2011 Namibia census, and they want to update EAs with population estimates from the 2020 WorldPop-Constrained gridded population estimates.

**Resources:**

* Avenza YouTube channel: [www.youtube.com/channel/UCeZXZIkHlWtW73pfj6Vdr1A](http://www.youtube.com/channel/UCeZXZIkHlWtW73pfj6Vdr1A)
* Avenza Maps Basic Training: [www.youtube.com/watch?v=z3sj5AYC3EI](http://www.youtube.com/watch?v=z3sj5AYC3EI)

**Steps:**

1. Download Avenza Maps AVENZA MAPS - 4LAND in the Google Play Store or App Store.
2. Create a new Avenza Maps account, if you do not have one already.
3. Allow Avenza Maps to use your device’s location (for offline navigation) and to access media files (to upload your own GeoPDFs).
4. When the device is connected to Wi-Fi or data, GeoPDFs can be uploaded from cloud storage locations (e.g., Dropbox, Google Drive), URL, or QR code. Here, we demonstrate upload of GeoPDFs from Dropbox.

Graphical user interface, application, Teams

Description automatically generated

1. Locate and select all of the GeoPDFs that you wish to upload to the device. Once uploaded, these files will appear in My Maps as Imported Maps.

Graphical user interface, application, Teams

Description automatically generated

1. To start navigation, select a map and click the crosshair button. The device location will appear as a blue dot on the map with a blue halo showing the location error. If the device has a compass, the map will spin depending on your direction of travel.

Graphical user interface, application

Description automatically generated

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