SENS Version 3 - Webinar 5

Wednesday, November 4th 2020
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Agenda of Webinar 5

• Brief overview of the tools and interconnections.
• Data collection with ODK Collect.
• Survey and data management with Kobo Toolbox.
• Survey and data management with Raspberry Pi.
The Platforms – Which One to Choose

Do I have a strong and stable internet connection?
- yes: UNHCR Kobo Toolbox (online)
- no: Do I have ODK Aggregate VM already installed on a computer?
  - yes: ODK Aggregate VM (offline)
  - no: Do I have the necessary IT skills or an IT person available to install ODK Aggregate?
    - yes: ODK Aggregate VM (offline)
    - no: Raspberry Pi (offline server, to be requested and sent from HQ)
UNHCR Kobo Toolbox – Pros and Cons

**PROS:**
- Easy to install and user-friendly.
- Not necessary to covert files to XML.
- Online sharing rights. Also adapted for contexts of country-level types of survey, where remote sharing of survey and datasets would be necessary.

**CONS:**
- Briefcase not compatible with Kobo Toolbox anymore. Potential syncing issues.
- Can share the project/survey/dataset only with users having an account on the Kobo Toolbox server.
ODK Aggregate – Pros and Cons

PROS:
• Well adapted when having unreliable or no internet connection
• Sharing rights easily put in place, not necessary to create an account for each role.
• Works better if syncing issues with datasets already encountered (compatible with ODK Briefcase).

CONS:
• IT skills necessary in order to install VM if ODK Aggregate is not installed on computer yet.
• Not adapted for contexts of country-level types of survey, where remote sharing of survey and datasets would be necessary.
• Conversion of the files to XML needed.
Raspberry Pi – Pros and Cons

**PROS:**
- Well adapted when having unreliable or no internet connection
- Easy to install (only plug in).
- Sharing rights easily put in place, not necessary to create an account for each role.
- Works better if syncing issues with datasets already encountered (compatible with ODK Briefcase).

**CONS:**
- Not adapted for contexts of country-level types of survey, where remote sharing of survey and datasets would be necessary.
- Conversion of the files to XML needed.
What is OpenDataKit (ODK) Collect

• Most well known MDC solution in the humanitarian sector.

• Open source solution for Android:
  – Widely used
  – Basis for numerous systems
  – Powerful and flexible
  – Secure storage on your own servers possible

• Different deployment profiles possible (offline with USB, offline on local network, online, etc.)
Why Use ODK Collect

- ODK Collect and Kobo Collect are similar apps. They could both be used for data collection for SENS.
- HOWEVER:
  - ODK Collect is updated and thus debugged on a more regular basis than Kobo Collect.
  - ODK Collect has more advanced features.
- THUS, use ODK Collect for SENS data collection.
  - Make sure you do not have both ODK Collect and Kobo Collect apps on your phone: as those 2 use the same directory on your phone, they can interact and bug each other if on the same phone.
What is KoBo Toolbox?

- KoBo: online server developed by Harvard Humanitarian Initiative with support from UN OCHA
- The server used for SENS survey is a UNHCR server.
Create an Account

https://kobo.unhcr.org

• Fill in the necessary information:
  – make sure the user name has no capitals, no spaces and no special characters.

• Check your emails for validation email:
  – it can take a few minutes;
  – be careful not to click on the link twice by mistake;
  – Check your spam if you cannot see the email.

• Then log in to the online platform.
Deploy forms in Kobo (1)

- Click on “New”, “Upload an XLSForm” and then upload the SENS XLS form.
- Name your project in Kobo Toolbox and click on “Create Project”.

Kobo Toolbox
Deploy forms in Kobo (2)

- For your SENS form to be accessible from ODK Collect on the Smartphones/Tablets, you will need to deploy the form by clicking on “Deploy”.
- You can also visualise it online (through an Enketo link) by clicking on the “Preview” button.
Deploy forms in Kobo (3)

- You can check if there are any errors on the **xls form online validator** (one error at a time) [https://getodk.org/xlsform/](https://getodk.org/xlsform/).
- Also, if there is an error in your XLS Form, **Kobo Toolbox** will inform you when you will attempt to deploy it.
  - It tells you where the error is and **one at a time**.
  - Once this (and all potential other) error(s) corrected, you will be able to deploy your form.
  - In the example below, a bracket is missing at the relevancy $\{$CASH\} = 1$
  - Please consult the IM officer or HQ if the bug cannot be fixed.
Sharing your project

- You can easily share your project with another Kobo user (on same server):
Get the Form (1) - Kobo Toolbox

KOBO Toolbox

Get blank forms

ODK Collect
Get the Form (2) - Connect to Kobo Toolbox

- Click on “General Settings”, “Server” and enter your account’s on Kobo Toolbox URL, username and password.

Structure of the URL:

the URL from the UNHCR Kobo Toolbox server will always have the following structure:

“https://kobocat.unhcr.org/[username]”
Get the Form (3) - Connect to Kobo Toolbox

• To make sure that enumerators will only have to enter the URL (and not the username and password as well) on their phones you need to check the settings on the Kobo Toolbox server.

• Click on the symbol in the upper right hand side of your Kobo Toolbox screen, choose “Account Settings” and then make sure the option “Require authentication to see forms and submit data” is not ticked.
  – This way, enumerators will only need the URL in order to access the forms
  – If this option is ticked on Kobo Toolbox, they will have to enter all the credentials: URL, username AND password.
Exporting dataset from Kobo Toolbox

- You can access and download the dataset by selecting on “Data” tab and then click on “Downloads”. Always choose “XML values and headers.”
- The SENS Mapper analysis tool requires data in “CSV” / “XML values and headers” format type export.
- Refer to “Tutorial 2 – Exporting Data for Analysis”.

![Screenshot of Kobo Toolbox interface with Download Data options highlighted: CSV and XML values and headers.]
Introduction - Raspberry Pi

- Aggregate is the platform used to manage the data.
- The Raspberry Pi server has been set up to include all necessary configurations and can be plugged into the computer through USB.
- Consult “Tutorial 11 – Connecting Mobile Device to Raspberry Pi Aggregate Server” on how to use Raspberry Pi.

Raspberry Pi

Get blank forms

Send filled surveys

ODK Collect
How does Raspberry Pi work? (1)

Phones must be connected to the **SAME wifi** to be able to access the server.

- **Web Browser:** IP address
- **Settings ODK:** IP address
- **ROUTER**
- **WIFI**
- **Gives the IP address to the SERVER**

With this system, **no need for INTERNET!**
How does Raspberry Pi work? (2)
How does Raspberry Pi work? (3)

1) Connect the Raspberry Pi and the router.

2) Connect your computer to the router.

3) Connect to Aggregate through the browser on your computer by entering always the same IP: `http://192.168.0.100`
Upload a form with Raspberry Pi

- Once connected to Aggregate on your browser, click on “Form Management”, “Forms List” and on “Add New Form”, choose the form in XML format and click on “Upload Form”.

![Xform Upload](image)
Get the Form – Raspberry Pi

Get blank forms

Raspberry Pi

ODK Collect
Connect ODK Collect to Raspberry Pi

- Address to enter in the browser: http://192.168.0.100, all Raspberry Pi servers have been set up for this address, when being used in combination with the mini-router provided with them.
- This is the SAME address that must be entered in the phones on ODK Collect.
Manage the data with Raspberry Pi

- In order to visualise and manage your data, select “Submissions” and “Filter Submissions”. You can then visualise all your data entries in a list.
  - To visualise them entirely one by one, click on “View” and to delete them one by one on the “X”.
  - You can also select “Visualize” to see the whole dataset in Pie Charts, Bar Graphs or on a Map.
Download the dataset with Raspberry Pi

- In order to download your dataset, under “Submissions” and “Filter Submissions” click on “Export” choose the type of the dataset (CSV File) and click on “Export”.
- CAREFUL: this database will not contain data from repeat groups (HH members, Children, Women). In order to obtain those, use Briefcase such as in the past.
- Refer to “Tutorial 2 – Exporting Data for Analysis”.

![Screenshot of dataset download process](image-url)
In order to obtain your XLS form in XML format use the **xls form online validator** at [https://getodk.org/xlsform/](https://getodk.org/xlsform/). Upload your XLS Form, click on “Submit” and on “Download XForm”.