

# Using Open Data Kit in combination with Google Drive

[Open Data Kit \(ODK\)](#) is a free and **open-source** set of tools which help organizations author, field, and manage mobile data collection solutions. ODK provides an out-of-the-box solution for users to:



- **Build** a data collection form or survey;
  - Multiple Question types (incl pics), pics, video, geo-location, multiple language
  - Offline
  - Viewable and editable before sending
- **Collect** the data on a mobile device and send it to a server (cloud hosted via google apps); and
- **Aggregate** the collected data on a server and extract it in useful formats (ODK 2016a)

Using ODK Build and Collect in combination with google sheets can simplify the backend of ODK significantly, as this way a complex and costly server set up is not required.

Open Data Kit Collect can connect to Google Drive, allowing users to send data collected on an Android device directly to Google Sheets. This makes setting up a mobile data collection effort simple, since you can get your data into the Google Cloud in an easy-to-use, user-friendly interface. Upload your forms to your Google Drive and ODK Collect will find them. Collect data on your mobile device and send it to Google Sheets. Photos taken from within ODK Collect will be stored on Picasaweb and linked to from Sheets. This is a simple, user-friendly way to manage and store your ODK data without having to set up a server like ODK Aggregate.

## 1. Prerequisites

- Basic familiarity with ODK Collect ([documentation](#) and [tutorials](#) available)
- Smartphone or tablet running Android 1.6 or newer
- Google Account, preferably the one already linked to the smartphone (or [create a new Google Account](#))
- **Note that several features of ODK and XLSforms are not supported with Google Sheets:**
  - [Grouping questions](#) are allowed, but no [repeats](#)
  - Up to 254 variables (or questions within the form that are displayed on ODK Collect)
  - Photos are supported, but audio and video are not.
  - All other XLSforms features, including GPS location, are supported.

## 2. Create Sheet for Submissions

1. Log in to Google Drive at [drive.google.com](http://drive.google.com) with Google account (the same one selected in ODK Collect preferences, see below).
2. Create a new, blank spreadsheet (*New > Google Sheets*) and give it a title (such as the name of your form plus submissions, like “myform-submissions”), but don’t fill in anything else in the sheet. Leave this sheet open because you’ll be copy and pasting its URL into your form.
3. Set access permissions for the blank sheet:
  - a. To give specific users access, click Share and add users’ emails, making sure they have Edit access
  - b. You can also turn link sharing on, allowing anyone with the link to edit the sheet. In order for them to send data submissions, click Share, then “Get link and turn link sharing on.” Then change “Anyone with the link can view” to “Anyone with the link can edit”.

## 3. Create a Form

1. Next, create a survey form. The best format for creating and editing of forms is *XLSforms* ([more info](#)). This can be done in Excel or much easier using the [ODK Form builder](#). Open the [ODK Form builder](#) webpage and create a free user account. You can also use the Form Builder as offline desktop version. Once your form is done, export it (*file > export to XLSform*).
2. Open the XLSform with Excel and in the *Settings* Tab, create a column called *submission ID*,

where you copy and paste the URL of your blank submission sheet (see above, named something like myform-submissions). This sets the destination path for any user of this form, so the data they submit will go to the right sheet.

	A	B	C	D
1	form_title	form_id	submission_url	
2	Untitled Fc	build_Un	<a href="https://docs.google.c">https://docs.google.c</a>	
3				

Make sure only alphanumeric characters (e.g. ABCdef123) and hyphens (-) are in the name column of the survey and choices sheets

- Now, you'll convert your form to an .xml file which ODK Collect will display as a form on your Android device. Thus save your form in Excel as .xlsx file
- Use the [ODK XLSform converter](#) (or download [XLSform Offline](#)) to turn your Excel .xlsx sheet into an XML file. Download the resulting XML file.
- Upload that XML file to your Google Drive account.
- Share the XML file with anyone else who will be collecting data and needs to download the form on their Android device.

#### 4. Install & Configure ODK Collect

- Install ODK Collect from this [file](#) (which can easiest be send to one or multiple phones on the linked Gmail address). Note that for apps installed from file a app preferences may need to be changed to "accept app install from unknown sources". After installation this can be unselected again.
- Open the ODK Collect app
- Click on the Menu (three dots in the upper right corner)
- Click on General Settings
- Under Server Settings, click on Platform so you can change the destination path for where your ODK Collect data will be sent.
- Select "Google Drive, Google Sheets"
- Next, click on Google Account and choose the account you wish to use with ODK Collect. This account will be where you store your forms on Google Drive and where your spreadsheet with all your and others' ODK data submissions will live. (Do not enter anything in the "Google Sheets URL" field.)
- Hit the back button to return to the main menu.
- To display pictures in survey questions these need to be named like in the XML file. Locate the ODK folder on the device storage or on the SD card. Create a new folder in the folder containing the respective survey and name it *SurveyName-media* (e.g. MACBIOTestApp-media). Now copy all pictures used in the form into this folder. They will be automatically recognized in the survey.

#### 5. Collect Data using ODK Collect

- Click "Get Blank Form." ODK Collect will search your Google Drive account for XML files, which will display after your list of folders. A good trick is to organize your XML files into a folder so you can find them easily.
- Download your sample form that you just created.
- In the main menu of ODK Collect, click "Fill Blank Form" and proceed to fill out your information. When complete, hit "Send Finalized Form" and your submission will appear in your Google Sheet.
  - Tip: The first time you send a submission to your new sheet, your device might ask for permission to submit to Google Drive. Click Allow to send data to your sheet.

#### 6. View your data

- Go to your submission sheet to view your data. You don't need to refresh the page to see new data streaming in.
- If you've included a photo in your form, your sheet will include a link to the photo. Photos are sent to each user's Picasaweb account (in an unlisted album where only users with the link can view). Each user must have a [Picasa profile](#) to submit photos. Picasa syncs to Google Photos so if users automatically backup to Google Photos, they'll see their ODK photos in both Google Photos and Drive.

#### 7. Acknowledgement

The above documentation is based on the documentation kindly provided by the Google Earth Outreach team.