

# ODK @ LSHTM

[opendatakit.lshtm.ac.uk](https://opendatakit.lshtm.ac.uk)



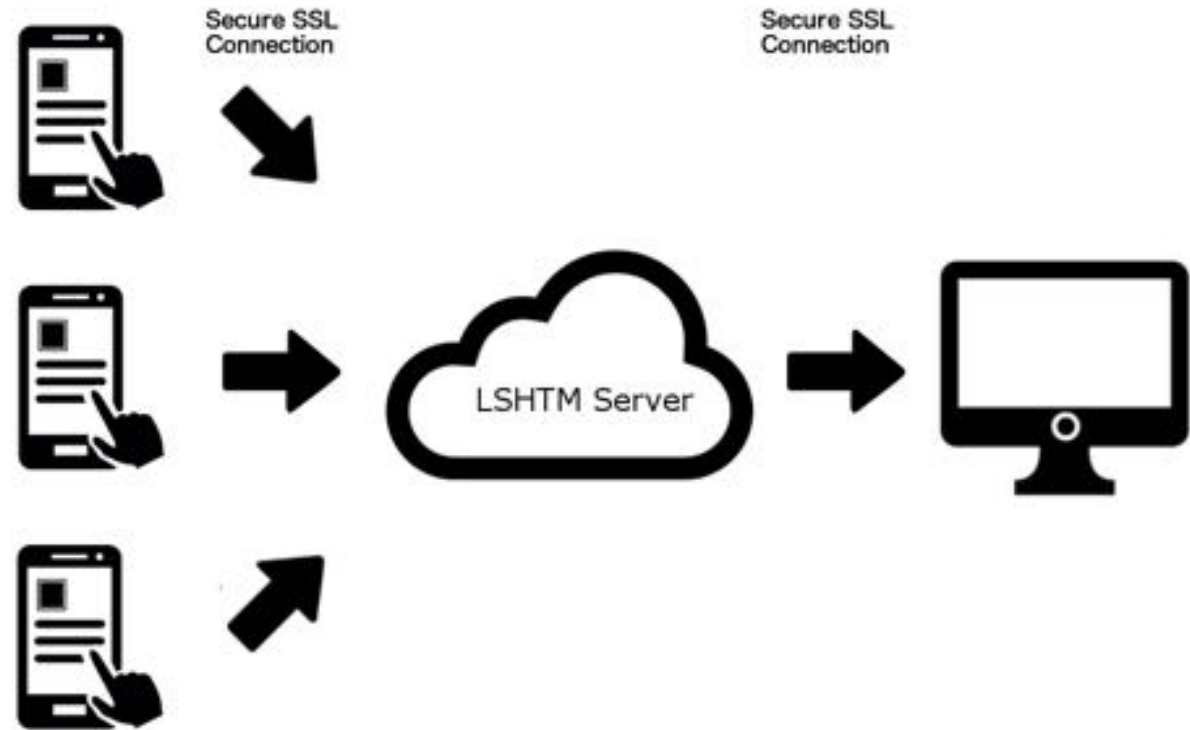
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# What is ODK @ LSHTM

- ODK is a suite of tools to enable electronic data collection from anywhere in the world
- @LSHTM we have setup a secure encrypted server for researchers and students
- Launched in September 2015

# Overview





**I LIKE PAPER FORMS – WHY DO I  
NEED ODK?**



# Problems with paper forms

- Hard to read
- Don't have to be fully completed
- Allow incorrect data entry
- Need to be copied over to a computer
- Get lost/wet/ripped

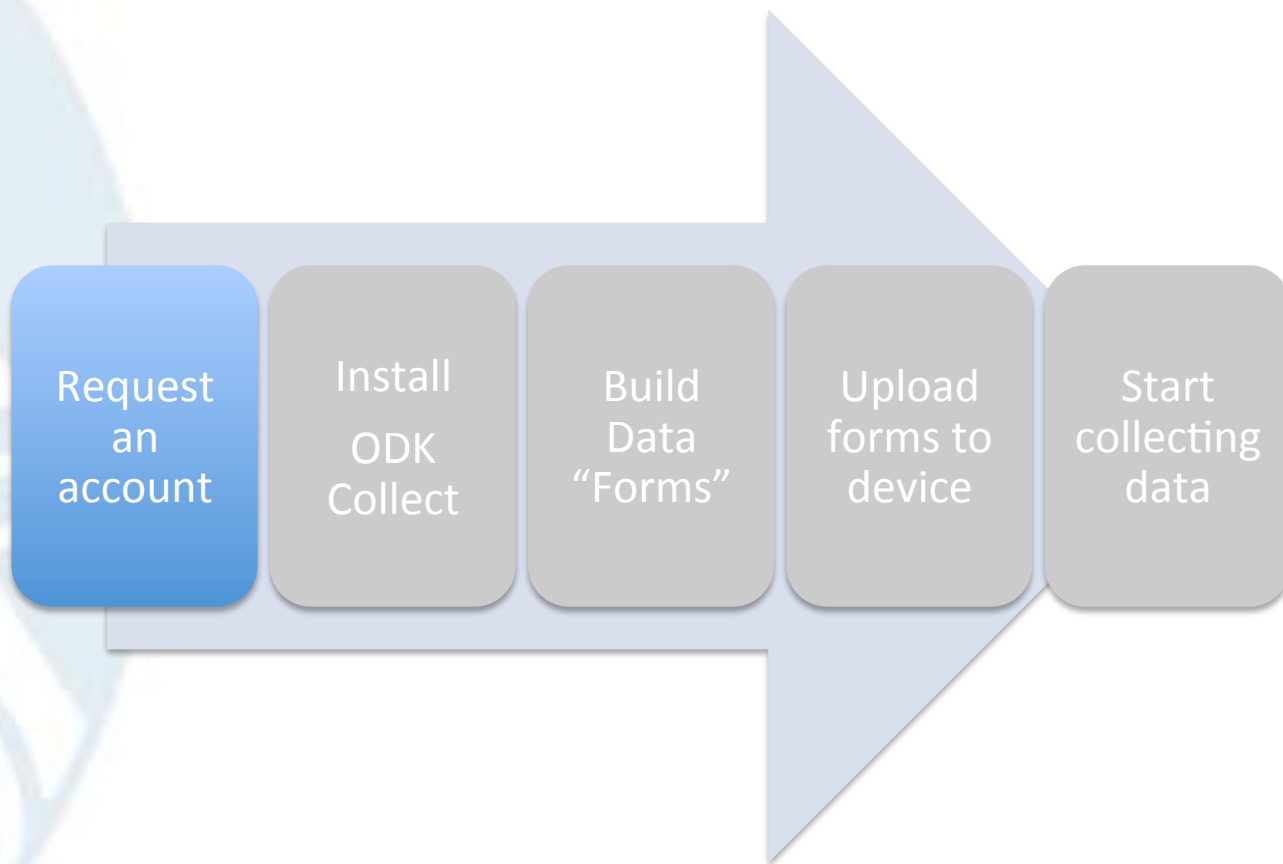


# Advantages of electronic data capture

- Improve Data Accuracy
- Improve Data Completeness
- Improve Speed of Analysis
- Prompts user at every stage what to do next



# How to use ODK@LSHTM



# ODK @ LSHTM Server Request

- Complete Server Request Form
- Available at [opendatakit.lshtm.ac.uk](http://opendatakit.lshtm.ac.uk)
- [Email : ODK@lshtm.ac.uk](mailto:ODK@lshtm.ac.uk)
- Server normally setup in < 1 week

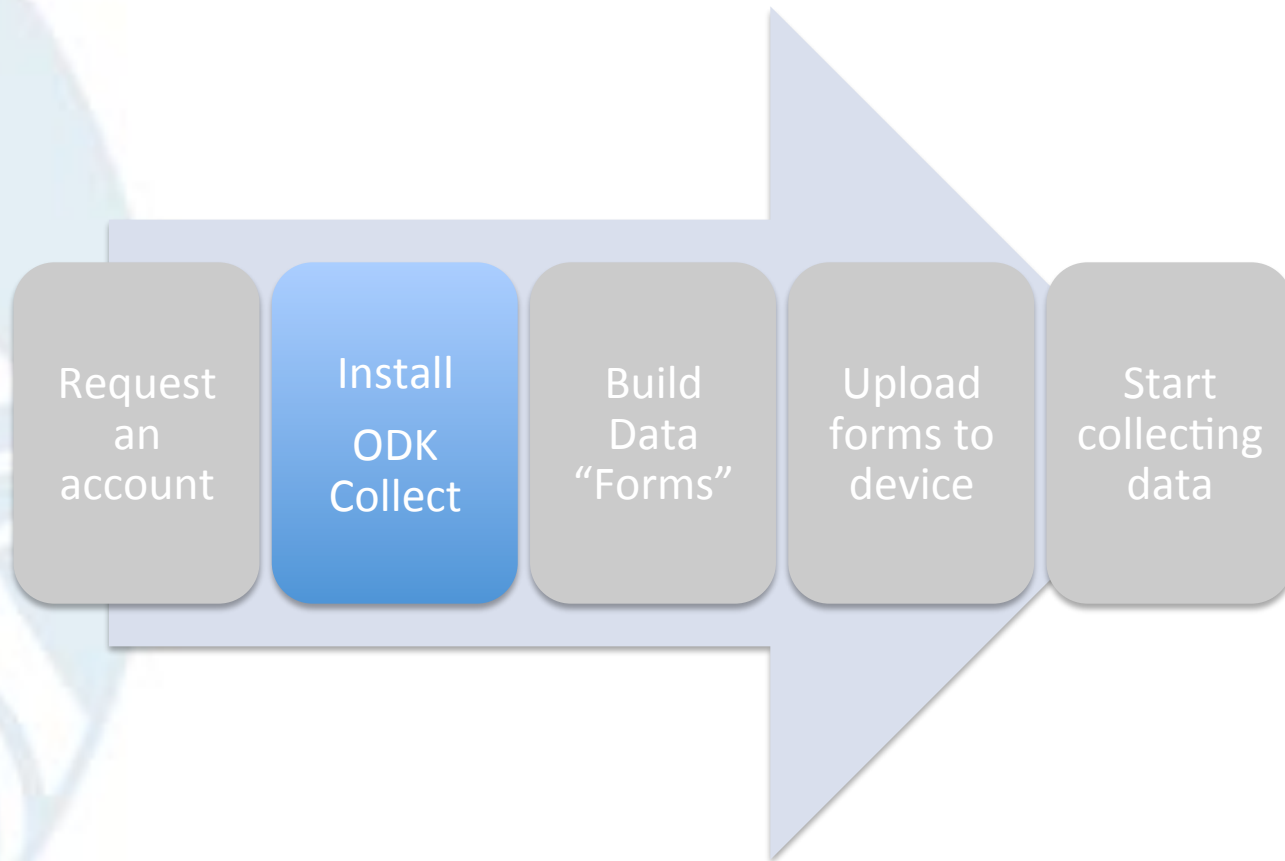




# ODK @ LSHTM Device Pool

- We have a small but growing central pool of devices
- These can be requested by users for their projects
- The Device Request form is available at [opendatakit.lshtm.ac.uk](http://opendatakit.lshtm.ac.uk)
- [Email : ODK@lshtm.ac.uk](mailto:ODK@lshtm.ac.uk)

# How to use ODK@LSHTM



# Install ODK Collect



## ODK Collect

Open Data Kit Productivity

 PEGI 3

★★★★☆ 807 



Google play



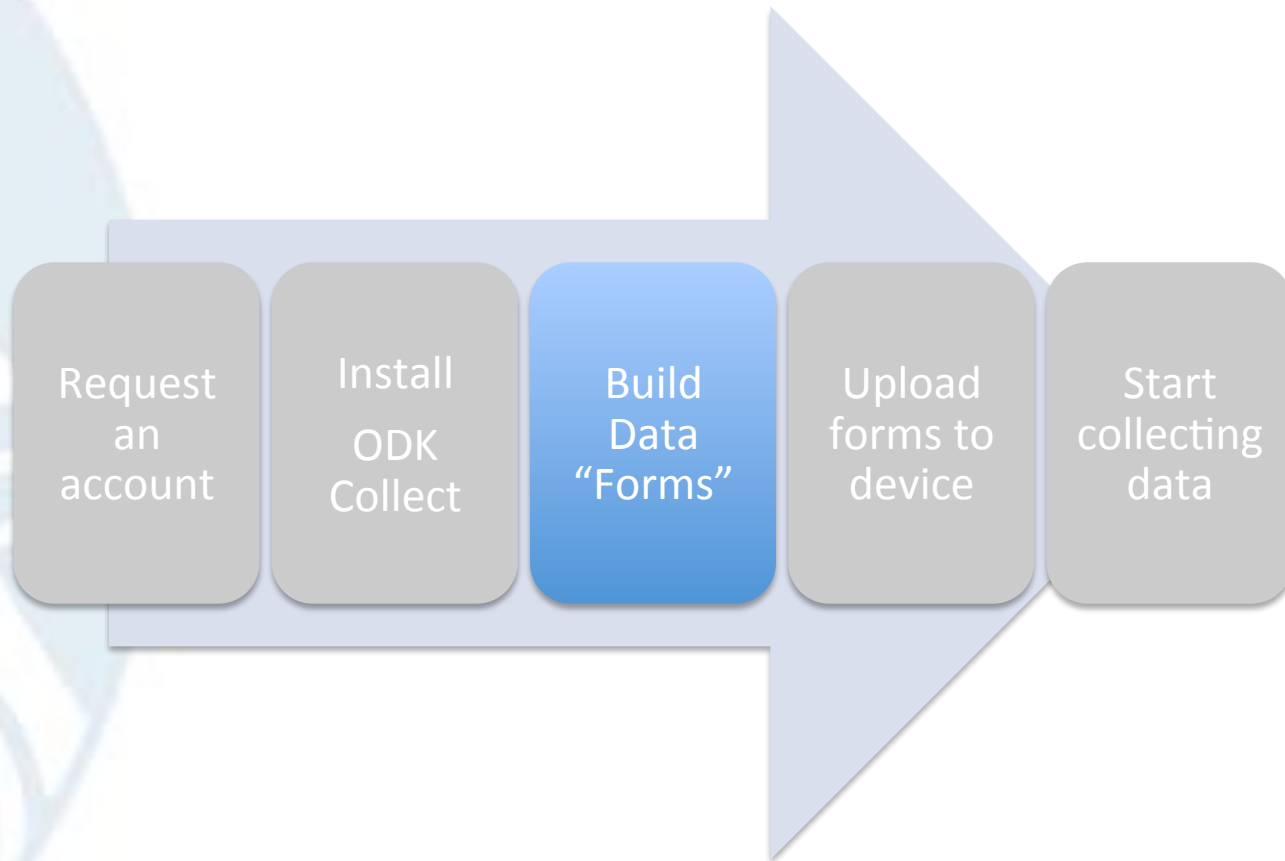
Add to wishlist

Install

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# How to use ODK@LSHTM





# Build a data collection 'form'

Recommended

	A	B	C	D	E	F
	type	name	label	hint	constant	constant_message
1	text	some_text	This is a basic fit in the blank question.	Hint provide additional information about a question that is displayed less prominently.		
2	note	test_image_audio_video_text	This question shows how to use translations and media types.	In order to select a different translation press your phone's menu button and you should see a "Change Language" button. In order to add media files put them in your phone's doc/forms/(formname)-media folder.		
3	integer	4_integer	Enter a integer.			
4	decimal	4_decimal	Enter a decimal.	This question has a constraint so that the decimal must be less than the integer.	=< \$4_integer	You can set the label that is shown when a constraint is violated.
5	calculate	calculate				
6	note	calculate_test_output	The sum of the integer and decimal: \$4_calculate			
7	select_one_yes_no	select_example	This is a select_one type question.	In the type column you must include the name of a choices list that sets the available options. Choices lists are specified on the choices sheet.		
8	text	required_text	Required field	You have to enter something to continue.		
9	acknowledge	acknowledge_test	Acknowledge prompts can be used to indicate some action was completed. For example, a real prompt might read, "Inform the subject how the data collected on them will be used."			
10	select_one_yes_no	skip_example	Skip the next question?			
11	text	skip_question	This question will be skipped if its "relevant" column is false.	You can also have skip logic for groups.		
12	begin repeat	repeat_test	A repeat			
13	text	repeating_question	This is a repeating question.	You can also repeat groups of questions.		
14	end repeat	repeat_test				
15	begin group	group_test	A group			
16	note	test_list_note	Using a group with a field-list appearance you can make multiple prompts appear on the same screen.			
17	select_multiple_yes_no	select_multiple_1	Select multiple 1		notselected(, 'yes') and selected (, 'no')	You can't select yes and no.
18	select_multiple_a_b	select_multiple_2	Select multiple 2			
19	end group	group_test				
20	begin group	table_list_example	Table-list group			
21	select_one_yes_no	table_list_question_1	Table list question 1	A text		
22	select_one_yes_no	table_list_question_2	Table list question 2	A text		
23	end group	table_list_example				
24	note	select_appearance_note	The following questions demo different appearance attributes			

Option 1 : XLS Form Design





# Build a data collection 'form'

Not  
Recommended

The screenshot shows the ODK Build web application in a browser window. The address bar displays <http://build.opendatakit.org/>. The page title is "ODK Build". The interface includes a menu bar with "Sample", "File", "Edit", "View", and "Help". A status bar at the top right indicates "Signed in as earthoutreach. Sign out." The main content area displays a list of form fields for a sample form:

- Enter your name.** Your name was given to you at birth. (Text field, required)
- Enter your age.** Today's year minus your birth year. (Text field, required)
- Enter today's date.** (Date field, required)
- Capture GPS Location** (Note: GPS accuracy) (Location field, required)
- Take a photo** If your phone is equipped with a built-in camera. (Image field, required)

On the right side, the "Properties" panel is visible, showing settings for the selected field (Date):

- Data Name:** The data name of this field in the final exported XML. (Text field)
- Caption Text:** The name of this field as it is presented to the user. (Text field)
- Hint:** Additional help for this question. (Text field)
- Default Value:** The value this field is preselected with at first. (Text field)
- Read Only:** Whether this field can be edited by the end user or not. (Checkbox)
- Required:** Whether this field must be filled in before continuing. (Checkbox)
- Range:** (Text field)
- Enable:** (Text field)
- Maximum:** (Text field)
- Advanced:** (Text field)

At the bottom, there is a toolbar with options: "Add new", "Text", "Numeric", "Date", "Location", "Media", "Choose One", "Select Multiple", "Group", and "Branch".

Option 2 : ODK Build





# Build a data collection 'form'

Not  
Recommended

```
<?xml version="1.0" ?>
<h:html xmlns="http://www.w3.org/2002/xforms"
  xmlns:h="http://www.w3.org/1999/xhtml"
  xmlns:ev="http://www.w3.org/2001/xml-events"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:jr="http://openrosa.org/javarosa">

  <h:head>
    <h:title>Simple Form</h:title>
    <model>

      <!-- instance -->
      <instance>
        <data id="myform" >
          <meta>
            <instanceID/>
          </meta>
          <mystring/>
        </data>
      </instance>

      <!-- bindings -->
      <bind nodeset="/data/meta/instanceID" type="string"
        readonly="true()" calculate="concat('uuid:',uuid())" />
      <bind nodeset="/data/mystring" type="string"/>

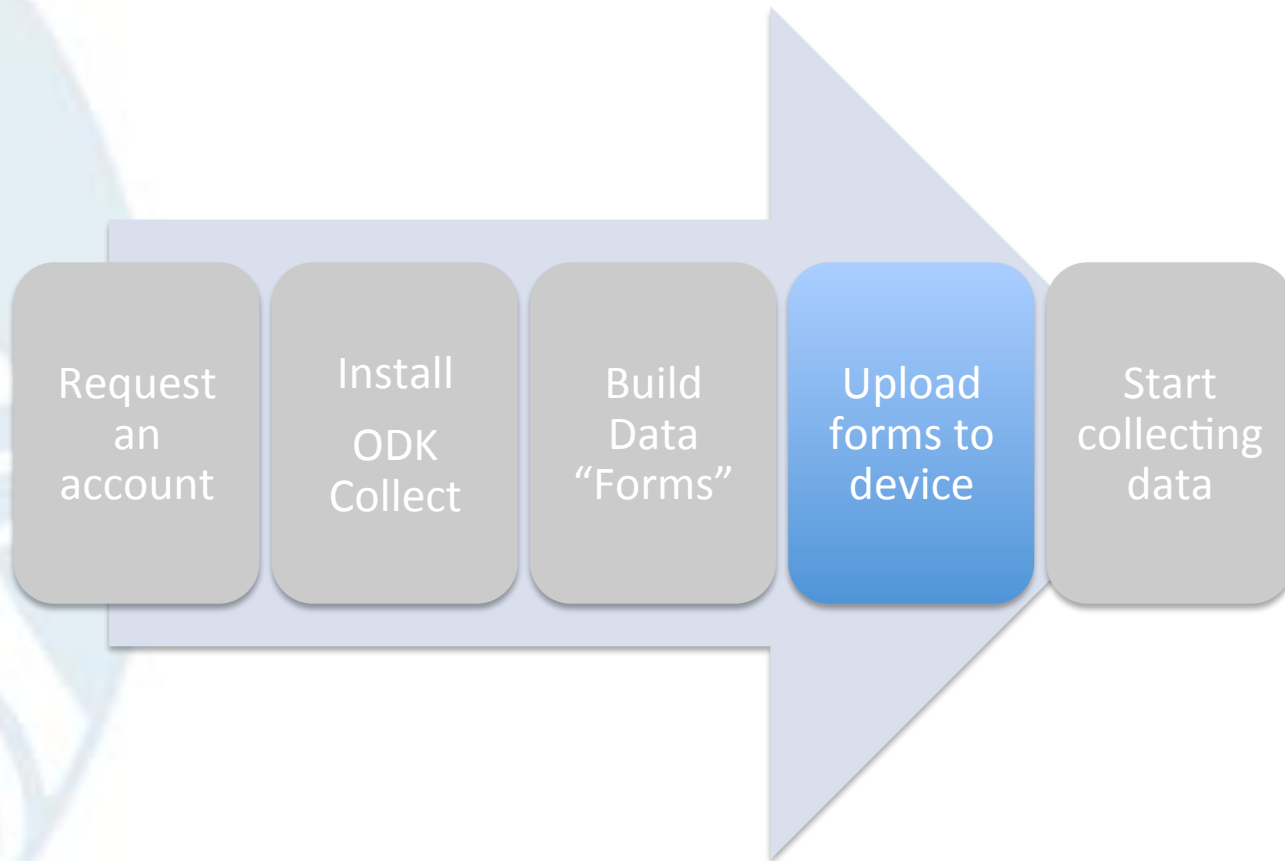
    </model>
  </h:head>

  <!-- body -->
  <h:body>
    <input ref="/data/mystring">
      <label>This is a string prompt</label>
      <hint>You don't need a hint, but you can add one</hint>
    </input>
  </h:body>
</h:html>
```

Option 3 : XML Editing

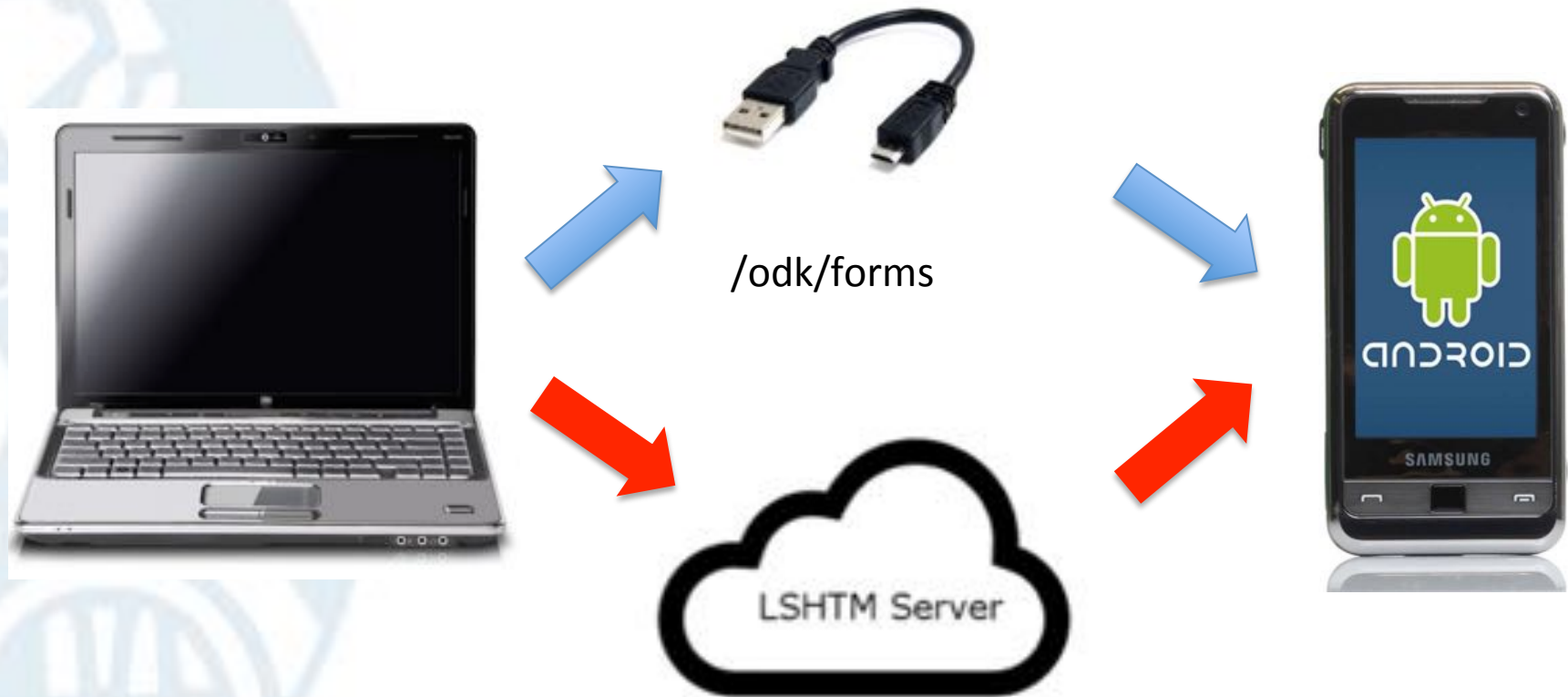


# How to use ODK@LSHTM

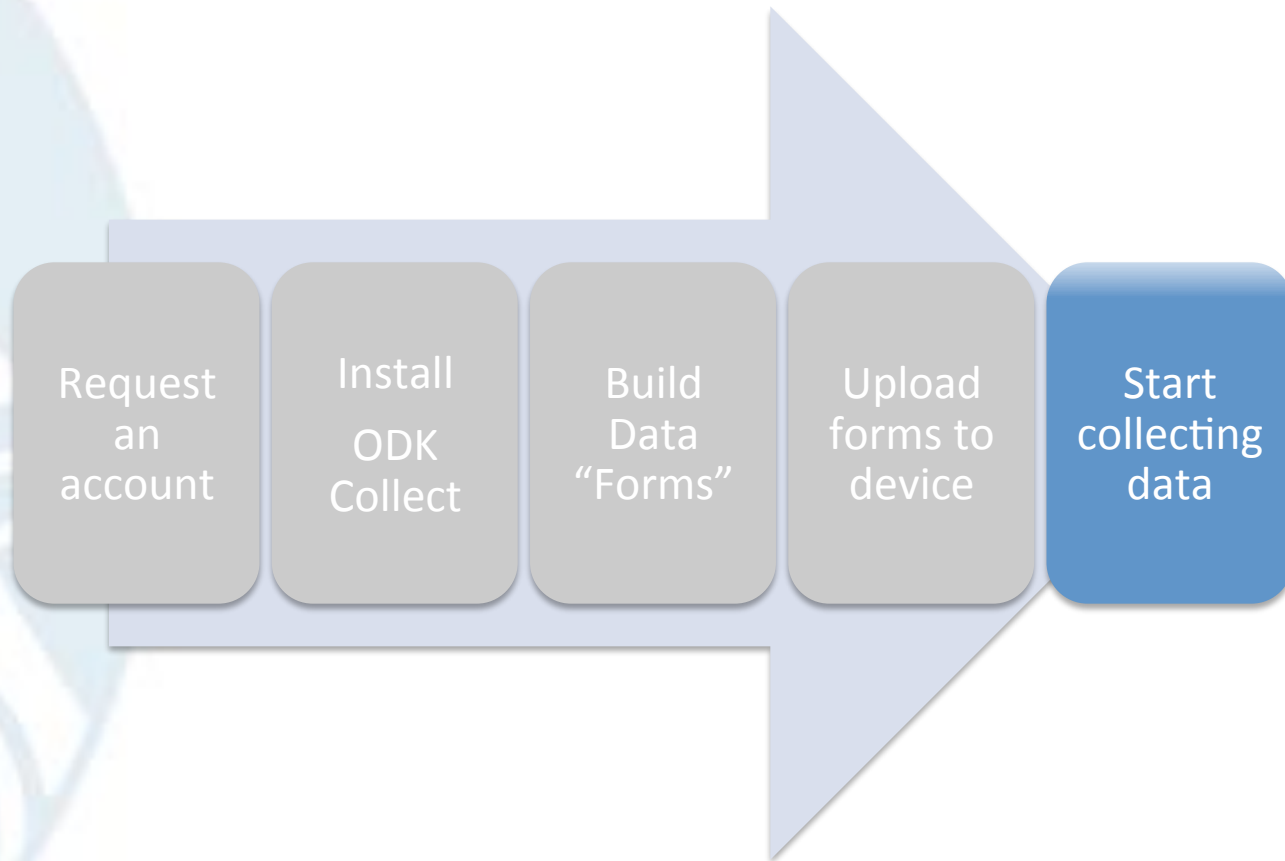




# Upload forms to device



# How to use ODK@LSHTM



ODK Collect v1.2 RC1  
Data collection made easier...

Fill Blank Form

Edit Saved Form


Send Finalized Form

Get Blank Form

Delete Saved Form

ODK Collect > Birds

You are at the start of "Birds". Swipe the screen as shown below to begin.



back to previous prompt

forward to next prompt

ODK Collect > Birds

Demographic information

Please enter your name:

Please enter your country:

Q W E R T Y U I O P

A S D F G H J K L

↑ Z X C V B N M ↵

7123 @ , \_ . ←

# Metadata

Metadata type	Meaning
start	Start date and time of the survey.
end	End date and time of the survey.
today	Day of the survey.
deviceid	IMEI (International Mobile Equipment Identity)
subscriberid	IMSI (International Mobile Subscriber Identity)
simserial	SIM serial number.
phonenumber	Phone number (if available).



# What kinds of data can be collected?

Question type	Answer input
integer	Integer (i.e., whole number) input.
decimal	Decimal input.
text	Free text response.
select_one [options]	Multiple choice question; only one answer can be selected.
select_multiple [options]	Multiple choice question; multiple answers can be selected.
note	Display a note on the screen, takes no input.
geopoint	Collect a single GPS coordinates.
geotrace	Record a line of two or more GPS coordinates.
geoshape	Record a polygon of multiple GPS coordinates; the last point is the same as the first point.
date	Date input.
time	Time input.
dateTime	Accepts a date and a time input.
image	Take a picture.
audio	Take an audio recording.
video	Take a video recording.
barcode	Scan a barcode, requires the barcode scanner app to be installed.
calculate	Perform a calculation; see the <b>Calculation</b> section below.
acknowledge	Acknowledge prompt that sets value to "OK" if selected.

# Constraint & Relevancy

## Constraint\*

survey				
	type	name	label	constraint
	integer	age	How old are you?	. <= 150

## Relevance

survey				
	type	name	label	relevant
	select_one yes_no	likes_pizza	Do you like pizza?	
	select_multiple pizza_toppings or_other	favorite_topping	Favorite toppings	\${likes_pizza} = 'yes'

# Calculation, Grouping, Skipping

## Calculation

survey				
	type	name	label	calculation
	decimal	amount	What was the price of the meal?	
	calculate	tip		$\${\text{amount}} * 0.18$
	note	display	18% tip for your meal is: $\${\text{tip}}$	

## Grouping & Skipping

type	name	label	relevant
integer	age	How old are you?	
begin group	child	Child	$\${\text{age}} \leq 5$
integer	muac	Record this child's mid-upper arm circumference.	
select_one yes_no	mrtd	Is the child's rapid diagnostic test positive?	
end group			



# Repeats

survey				
	type	name	label	repeat_count
	integer	num_hh_members	Number of household members?	
	begin repeat	hh_member		\$(num_hh_members)
	text	name	Name	
	integer	age	Age	
	select_one male_female	gender	Gender	
	end repeat			
choices	list name	name	label	
	male_female	male	Male	
	male_female	female	Female	



# Multiple Language Support

survey					
	type	name	label::English	label::Español	constraint
	integer	age	How old are you?	¿Cuántos años tienes?	. <= 150

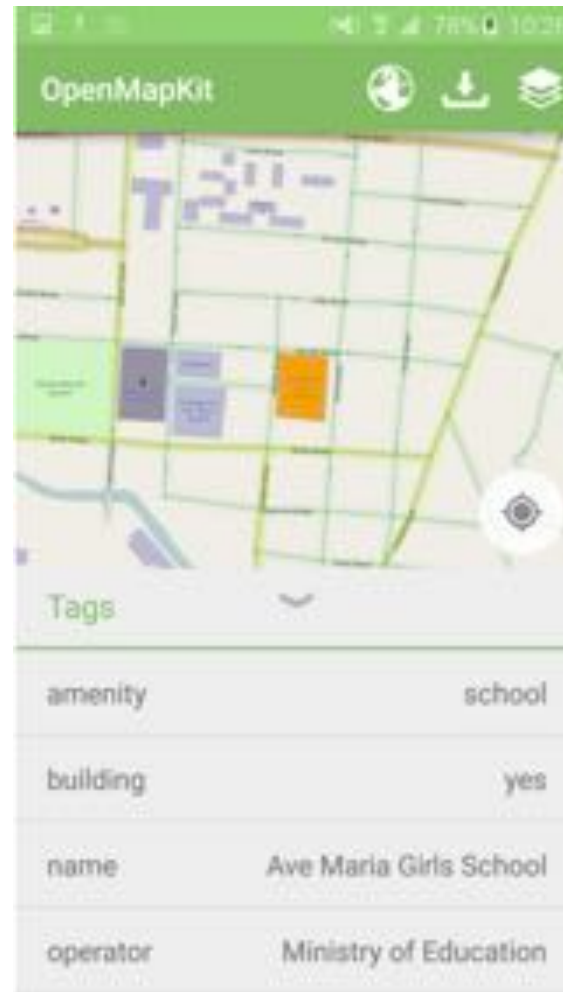
Open Localization project : Help translate ODK

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# Annotate Maps

- OpenMapKit plug-in
- Allows you to annotate maps in the field
- Export data to a GIS package of your choice

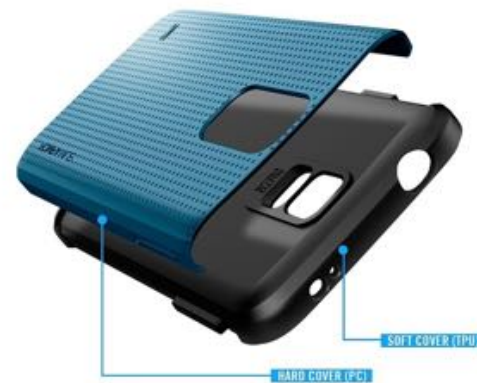


- Data from sensors
  - (wifi/bluetooth)
- E-consent
- Barcode scanning via camera
- Calls to 3<sup>rd</sup> party apps
- Fill data from 3<sup>rd</sup> party apps



# Out in the field : Collecting

- Don't need
  - mobile signal
  - data signal
  - WIFI
- Do need
  - Power
  - Armour
  - Spare batteries



# Out in the field : Uploading

- Wifi/Mobile Data connection
  - Upload can be done at the end of each day/week/trip
- Single click upload
  - All your data gets sent to ODK@LSHTM
- Security
  - ODK@LSHTM is a fully encrypted (SSL) server with a direct data link to your phone



# Getting your data back

- Data can be exported from ODK@LSHTM in text file formats (CSV, TDT, TXT) or XML
- Media exported with filename links to forms
- Compatible with R, STATA, MATLAB, EXCEL etc.





# When can I get access?



A world map showing the global distribution of access points. Red location pins are placed in various regions: Africa (Algeria, Mali, Niger, Chad, Nigeria, Ethiopia, Sudan, South Sudan, Angola, Zambia, Botswana, South Africa), South America (Venezuela, Colombia, Peru, Brazil, Bolivia, Chile, Argentina), and the Pacific (Papua New Guinea, Solomon Islands, Vanuatu, New Zealand, and a point in the North Pacific). The map also labels major oceans and countries across all continents.

# NOW!

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The logo of the London School of Hygiene & Tropical Medicine, featuring a circular emblem with a classical figure and the text 'LONDON SCHOOL of HYGIENE & TROPICAL MEDICINE'.



# NOW!

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# How can I use ODK

- Complete the request form:
  - <http://opendatakit.lshtm.ac.uk/contact-us/>
  - Email [ODK@lshtm.ac.uk](mailto:ODK@lshtm.ac.uk)
  - We will setup a password-protected secure server just for your project
- We will run tutorials on how to create ODK questionnaires

