

# Mobile Data Collection

## An overview

- ODK – Open Data Kit
- XLSForms
- ONA
- Epicollect5
- **KoBoToolbox**

More players on the market and good overview of different tools:

<http://craigappl.github.io/Decisions-Decisions/>



*©The Amazon Conservation Team*



## Collect the data you need to make decisions

From text to pictures to location, collect the data you need to make the right decisions. Our tools also support complex branching, answer validation, multiple languages, and offline work!

## Use out of the box or build your own

Use our mobile, server, and desktop tools as they are, or customize them so they support your workflows in the field, in the office, or anywhere in between.

## Easy to start and even easier to scale

ODK tools are simple enough for anyone to use and robust enough for international organizations to rely on. [Get started!](#)

# ODK Open Data Kit

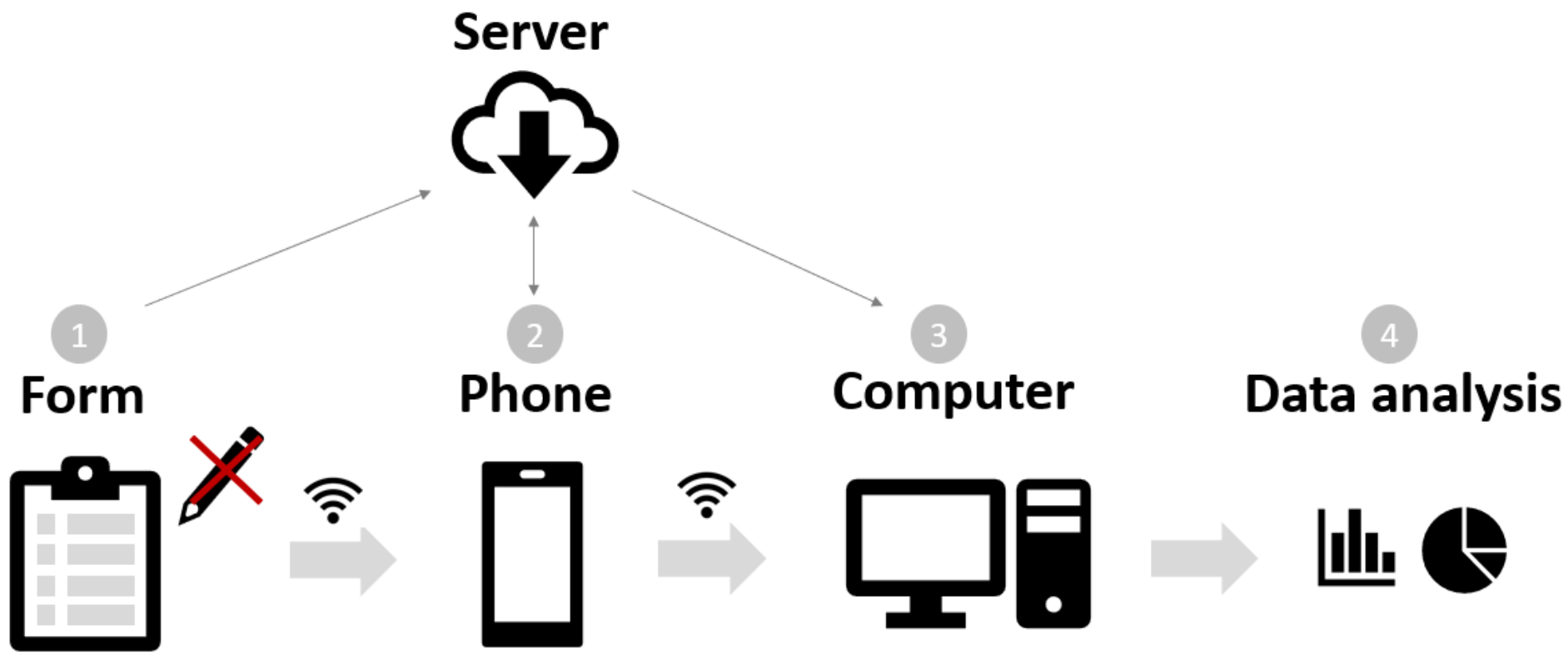
<https://opendatakit.org/>

- The standard for **mobile data collection**
- **Free** and **open-source** software for collecting, managing, and using data in resource-constrained environments
- Open Data Kit tools help millions of people around the world collect, manage, and use their data

Users include [Google](#), [WHO](#), [CDC](#), [USAID](#), the [Red Cross and Red Crescent](#), the [Carter Center](#), the [Jane Goodall Institute](#) and [many others](#).

From [monitoring rainforests](#) to [observing elections](#) to [tracking outbreaks](#), Open Data Kit is the standard for mobile data collection.





# 1

## Create a Form

**XLSForm** <http://xlsform.org/en/>

- XLSForm is a **form standard**
- Helps to simplify the authoring of forms **in Excel** (= familiar tool)
- Simple to get started with
- Allows for authoring complex forms (skip logic, multiple choice, set ranges, list of choices based on preloaded data, dropdown lists, constraints, hints, calculations, grouping,...)
- Forms designed with Excel can be converted to Xforms\* that can be used with ODK tools

[SHOW XLSFORM EXAMPLE](#)

# 2

## Smartphone setup

Setup on **Android Phones only!**

(no applications available for iOS iPhone)

1) Download **data collection application** from Google Play Store

→ You need a Google account for this.

→ Install “**ODK Collect**” or “**Kobo Collect**”



2) Link ODK Collect/Kobo Collect to the ONA-application and forms  
(= link to server)

3) Download the form → Click on button “**Get Blank Form**”

4) Install lookup tables

→ connect the phone to the computer

→ paste the lookup table (csv file) under the folder: odk/forms/survey-media

5) Set an Admin password

6) Hide the Delete-Form button

## 3

# Computer

- Collected data from the forms get sent to the server
- Connect with your computer to the server to see the data
  - This is usually done via your internet browser
  - Login to the application you are using (ONA, KoBoToolbox,...)
  - Consult the online dashboard

## 4

# Data Analysis

- Dashboard provides basic statistics and/or an online map
- Export the data to Excel or other format for further analysis





<https://ona.io/home/>

# ONA

- Reliable mobile data collection
- Hosted solution
- Accessible visualization
- Seamless collaboration
- Get insights in real time

<https://github.com/onaio/onadata/wiki/Configuring-ODK-collect-with-your-Ona-account>

The screenshot shows the ONN mobile application interface. At the top, it displays the user's location as 'ukanga' and the current page as 'Monitoring Forms > Mali health facilities'. Below the navigation bar, there are tabs for 'Overview', 'Map', 'Table', 'Summary Charts', and 'Settings'. The 'Map' tab is active, showing a map of Bamako with numerous red location pins. A sidebar on the left shows a smaller map and form details: Region (Bamako), District (Commune3), and ID (ML38539). On the right, a 'Submission 42' card displays submission details: Submitted at 10:51 am on Aug 22, 2015, Record ID: 207189, and Edit or Delete options. Below this, a list of metadata is shown: Region (Bamako), District (Commune3), ID (ML38539), Structure (ASA9458B), Source (OMS Survey), Number of villages (12), and Type (Urban).

The screenshot shows the ONN web dashboard. The top navigation bar includes 'ONN', 'Home', 'Organizations', and 'Projects'. The main header displays 'Monitoring Forms' with a star icon and the user's name 'Edward Wilson (you) ukanga'. Below the header, there are filters for 'PRIVATE', 'General', 'Africa', and '6 forms'. A list of monitoring forms is displayed with columns for form name, count, type, creation date, and last update. The forms listed are: 'Mali health facilities' (1120, Webform, Aug 2, 2015, last 1 week ago), 'Ruhira water point monitoring' (42, Webform, May 4, 2015, last 1 month ago), and 'Kenya mobile banana markets' (121, Webform, July 18, 2015, last 2 weeks ago).

The screenshot shows a detailed view of 'Water points > Baseline assessment' in the ONN web dashboard. It features a map of a neighborhood with streets labeled 'Main St' and 'Queens Ln', and several red location pins. To the right, a 'Submission 42' card shows submission details: Submitted at 10:51 am on Aug 22, 2015, Record ID: 807189, and Edit or Delete options. Below the map, a bar chart titled 'Rate of improved points' shows the number of improved points over time, with values approximately 2, 4, 1, 5, 6, 3, and 8.

# ONA

## Pricing

- **Public projects:** free and unlimited submissions and forms
- **Private projects:** sign up for a paid plan to collect, share, analyze data privately

	<b>Free</b> <b>\$0</b> <a href="#">Get Started Free</a>	<b>Standard</b> <b>\$99</b> /month <a href="#">Email Us to Sign Up</a>
Private projects <sup>i</sup>	1	2
Private forms <sup>i</sup>	10 (total) <sup>i</sup>	15 (active) <sup>i</sup>
Private form submissions <sup>i</sup>	500	5,000
Data storage <sup>i</sup>	Unlimited	Unlimited
Data collectors <sup>i</sup>	Unlimited	Unlimited
Collaborators <sup>i</sup>	Unlimited	Unlimited
Custom user roles <sup>i</sup>	✓	✓
Support contacts <sup>i</sup>	—	1
Support level <sup>i</sup>	Community <sup>i</sup>	Email <sup>i</sup>
Online form builder <sup>i</sup>	✓	✓
Multimedia question types <sup>i</sup>	✓	✓
Beautiful maps and charts <sup>i</sup>	✓	✓
Preload data into forms <sup>i</sup>	✓	✓
Filtered datasets <sup>i</sup>	—	✓
Merged datasets <sup>i</sup>	—	✓
Saved dashboards <sup>i</sup>	—	✓
Tableau integration	—	✓
Google Sheets integration <sup>i</sup>	—	✓



**Epicollect 5** = next evolution of [Epicollect](#) and [Epicollect+ \(Plus\)](#)

- Mobile & Web Application for easy data collection
- Mobile app is available for both Android (4.4+) and iOS (8+)
- Generation of forms (questionnaires)
- Freely hosted project websites for data collection

More on: <https://five.epicollect.net/>

Userguide: <https://epicollect5.gitbooks.io/epicollect5-user-guide/content/>

- Data are collected (including GPS and media) using multiple devices
- All data can be viewed on a central server (via map, tables and charts)
- Data exports to csv and json format
- 100% free to use without any limits
- Open source technologies: service is provided for free, forever

- Suite of tools for field data collection for use in challenging environments
- Software is free and open source
- Free hosted solution / free hosted account
- End-to-end solutions in a plug and play environment

OPEN SOURCE DEVELOPMENT SUPPORTED BY



HARVARD  
HUMANITARIAN  
INITIATIVE



BRIGHAM AND  
WOMEN'S HOSPITAL



WITH ADDITIONAL SUPPORT FROM



United Nations Office  
for the Coordination of  
Humanitarian Affairs



United Nations  
High Commissioner  
for Refugees and  
Migrants



World Food Programme



WORLD  
RESOURCES  
INSTITUTE



Save the Children



USAID  
FROM THE AMERICAN PEOPLE



MacArthur Foundation



FIDELITY FOUNDATION

TIDES



CISCO



HUMANITY  
UNITED

## YouTube video: A quick tour of KoBoToolbox



[https://www.youtube.com/watch?time\\_continue=11&v=4PNtT51h3CQ](https://www.youtube.com/watch?time_continue=11&v=4PNtT51h3CQ)

## FORM BUILDER

- Design forms quickly and easily  
using our intuitive form builder
- Reuse existing questions and blocks of questions  
and manage them in the question library
- Build complex forms with skip logic and validation
- More than 20 different question types available  
including location, image, video, rating, matrix, etc.
- Easily share projects with colleagues  
and set granular permission levels
- Import and export XLSForms  
Import via URL or upload from your computer

## COLLECT DATA

- Online and Offline
- On phones, tablets or any browser  
Using [KoBoCollect](#) on Android devices and Enketo on any modern browser
- Synchronize data via SSL  
Ensures data can't be read by a third party
- Strong safeguards against data loss  
Even on very long interviews
- Data immediately available right after it's collected

## ANALYZE AND MANAGE DATA

- Create summary reports with graphs and tables  
and fine-tune your report's charts, colors and questions
- Visualize collected data on a map  
(includes a heatmap, clustering, other base layers, etc.)
- Disaggregate data in reports and maps  
I.e. by gender, region or educational level
- Export all your data at any time  
Supported formats: Excel, CSV, KML, ZIP (for media) and SPSS
- Access your data through our robust API

## LIVE DEMO KoBoToolbox platform

Create a KoBoToolbox account:

### GET STARTED

Get started with KoBoToolbox now, it's free and it takes under a minute. We have two publicly-available instances of KoBoToolbox you can choose from:

<p><b>Unlimited Use for Humanitarian Organizations</b></p> <p>Provided by UN OCHA</p> <p><a href="#">CREATE AN ACCOUNT</a></p> <p>or <a href="#">login</a></p>	<p><b>Researchers, Aid Workers &amp; Everyone Else</b></p> <p>Provided by KoBoToolbox</p> <p><a href="#">CREATE AN ACCOUNT</a></p> <p>or <a href="#">login</a></p>
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Advanced users can also install KoBoToolbox on their own server (or on a local machine) using Docker. See our [kobo-docker](#) repository on GitHub for details.

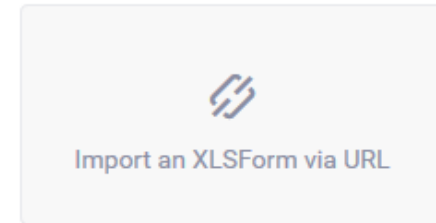
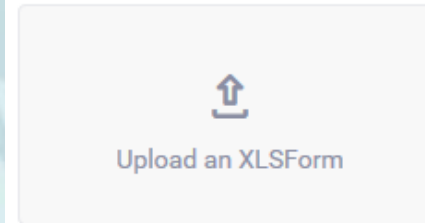
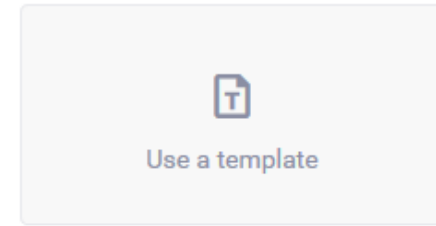
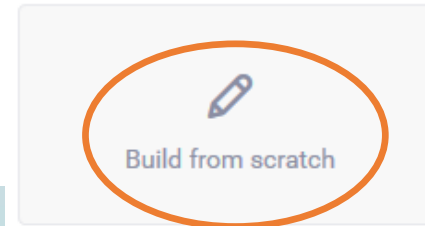
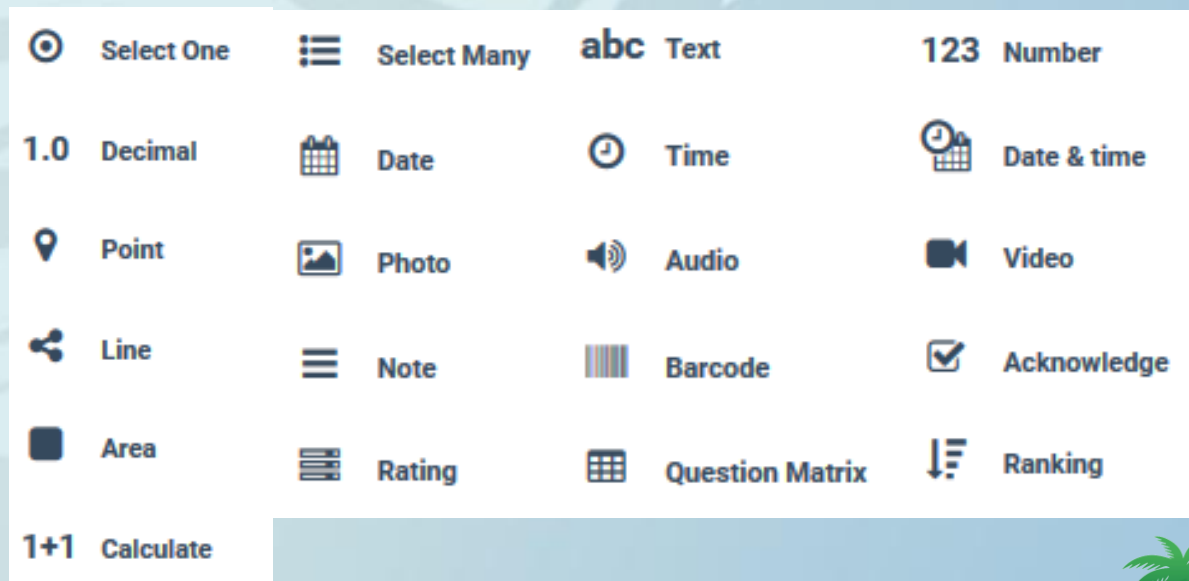
**Give your  
username to  
Peter**

**Step 1: Create a project** →

**Step 2: Add Questions**

+ Add Question

Types of questions:



**Step 3: Deploy project**



 Share form

## Project owner shares form by setting Sharing Permissions

- Invite collaborators: enter username
- Set permissions to new team members
  - View Form
  - Edit Form
  - View Submissions
  - Add Submissions
  - Edit Submissions
  - Validate Submissions

# LIVE EXERCISE Data collection

filling in and sending a data form in the field

**Standard Form to  
collect data on illegal dump sites**

**Android only**



# Install Kobo Collect Application on phone

- 1) Go to Google Play Store
- 2) Search for “Kobo Collect”
- 3) Download/install the Kobo Collect App
- 4) **General Settings/Server** of the App:
  - point the url to the username of the person that created/deployed the form (juliec).
    - Change the last part of the url to **juliec**
  - Use your own KoboToolbox username and password for the KoBo Collect App, to be able to access a shared form via Get Blank Form
- 5) Click on button "**Get Blank Form**“ to download the form
  - Select the form on illegal waste dump sites
- 6) FILL out the form OUTSIDE (GPS point!)
- 7) Do not forget to SEND the form when finished.



## **PART 2**

**SMS-based questionnaires  
using “Flows”**



<https://app.rapidpro.io/>

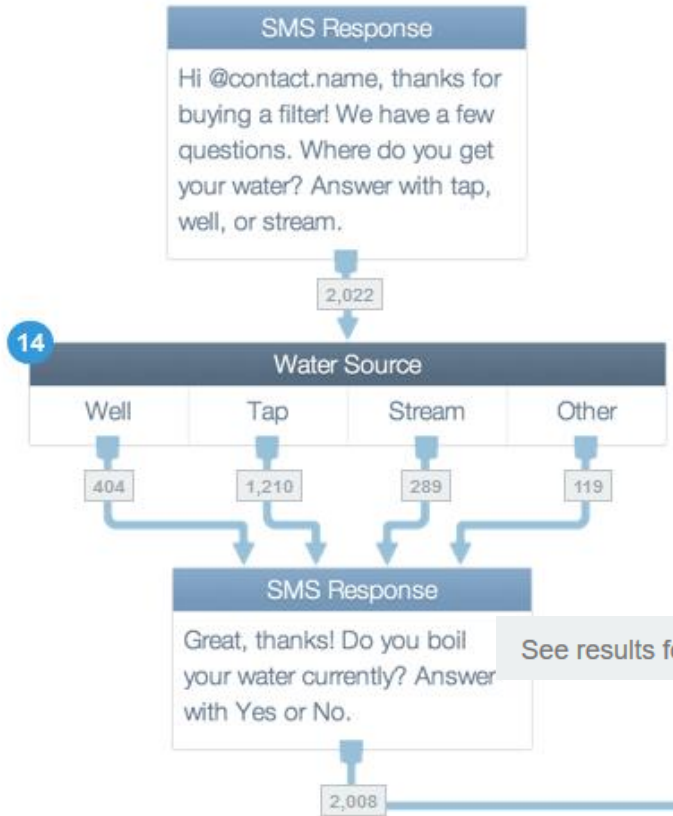


<http://textit.in/>

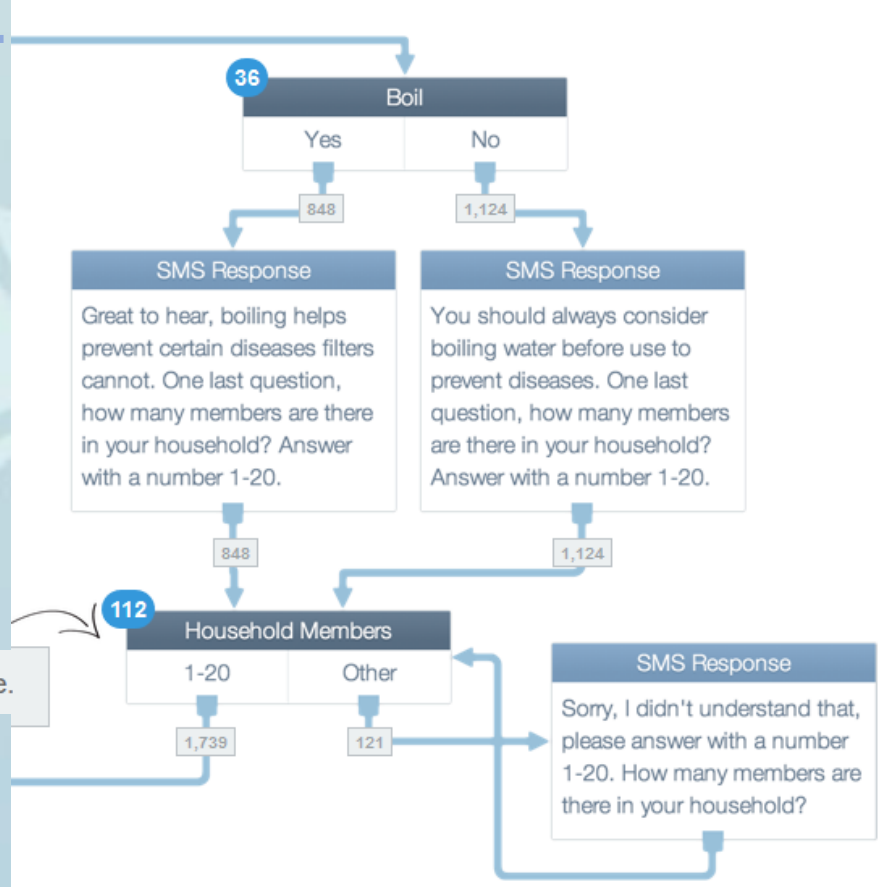
Visually build nationally scalable mobile applications from anywhere in the world

- Open source platform from Nyaruka and UNICEF
- Free Android application
- Easy visually build SMS-based applications and questionnaires using “**Flows**”
- No need for a programmer or consulting company
- Avoid expensive set-up costs or external technical support
- Set up campaigns

# Flow engine (core of RapidPro)



See results for your flow in real time.



Real-time analytics or export to Excel



- Deployment guide: <https://app.rapidpro.io/deploy/>
- Rapid Pro landing page: <http://rapidpro.github.io/rapidpro/>
- Rapid Pro FAQ's: <https://community.rapidpro.io/faqs/>



### Annual Credit Bundles - No Monthly Fees

Every account includes **1,000 credits** to get you started.  
All credit bundles are good for a full year.

1,000 credits
<b>\$20</b> 2¢ each

2,500 credits
<b>\$40</b> 1.6¢ each

10,000 credits
<b>\$140</b> 1.4¢ each



<https://ona.io/services-rapidpro.html>



# Questions?

