**Survey Solutions**

Dear friends of Survey Solutions,

In version 5.0.0 that we have released on September 1, 2015 you will find a radically improved interface and lot of helpful new features to automate common tasks when you conduct larger surveys:

New design of the Interviewer and Tester application
- Colors that communicate status
- Expandable navigation pane
- Compact view of disabled questions
- Buttons for navigating to the next or parent section

Improvements to users and assignments management at the Headquarter
- Batch creation of user accounts.
- Possibility to archive interviewers and/or supervisors.
- Names and phone numbers for users.
- Other changes to Headquarter functionality.

Changes to questionnaire designer and programming language

New guides on the use of functions in Survey Solutions

We will describe the changes and improvements in detail in subsequent sections.

# New design of the Interviewer and Tester application

We have revised the Interviewer and Tester applications' interface to ensure compatibility with the latest Android 5.0 "Lollipop" operating system and introduced a large number of practical and aesthetical improvements.

In terms of aesthetics, the applications have been revised to follow Google's Material Design guidelines, making the applications more visually pleasing and providing a familiar interface common to other modern Android applications.

The practical improvements are manifold:

- Colors that communicate status
- Expandable navigation pane
- Compact view of disabled questions
- Buttons for navigating to the parent or next section

Let's look at each improvement in turn.

## Colors that communicate status

Based on user feedback, Survey Solutions adopted a simple scheme for communicating to interviewers the status of each section. Green indicates that a section is complete—that is, that all questions have been answered and none have invalid answers. Blue denotes incomplete—that is, that some questions are unanswered. Red indicates that one or more questions in the answer has an invalid answer—that is, an answer that violates the validation condition.
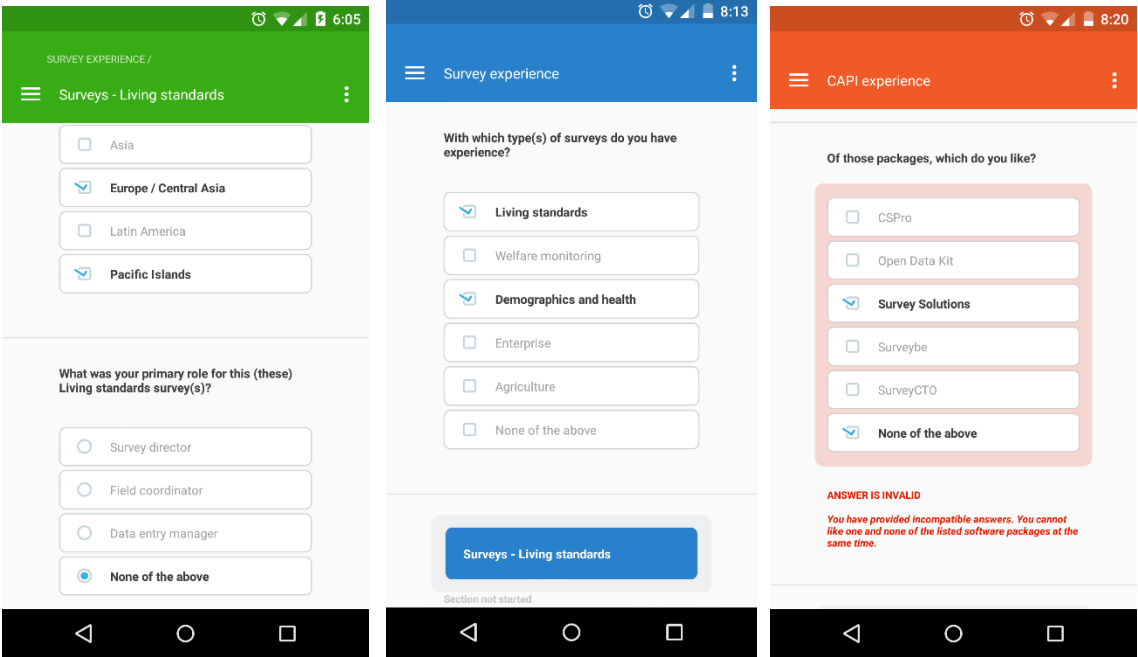
## Expandable navigation pane

Observing that the navigation pane is often interviewers' preferred method for moving around questionnaires, Survey Solutions improved the navigation pane. Earlier, the pane showed only the qusetionnaires's sections—that is, the major divisons in the questionnaire. Now, the pane provides a mechanism for drilling down and moving to questionnaire sub-sections. Whenever a section contains sub-sections, the interviewer will see a plus sign next to that section. When the interviewer taps the plus sign, they can see all of the sub-sections that that section contains.

Because the navigation pane also provided interviewers important information on which sections were complete and which were not, Survey Solutions extended the color scheme described above to the navigation pane. Complete sections are colored green, incomplete sections blue, and error-filled sections red.
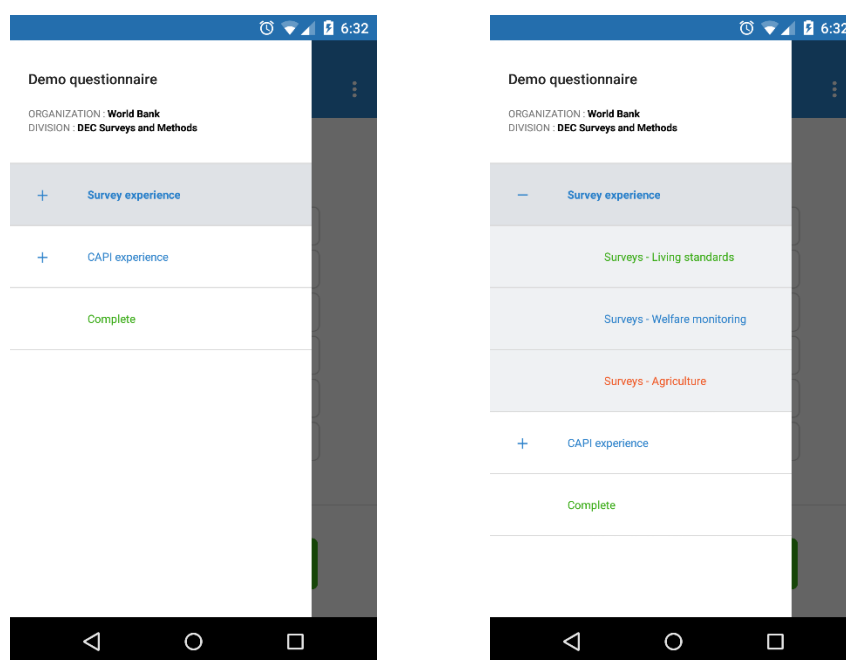


## Compact view of disabled questions

Disabled questions used to take up as much screen real estate as enabled questions. This required interviewers to swipe and swipe before finding the next enabled question.

To address this concern, Survey Solutions now displays enabled and disabled questions differently. Enabled questions appear with both a question and an area for recording answers. Disabled questions display only the question but not the space-consuming area of inputting an

answer. In this way, interviewers can still see the questions that are disabled. But they are not presented with any unnecessary visual distractions.
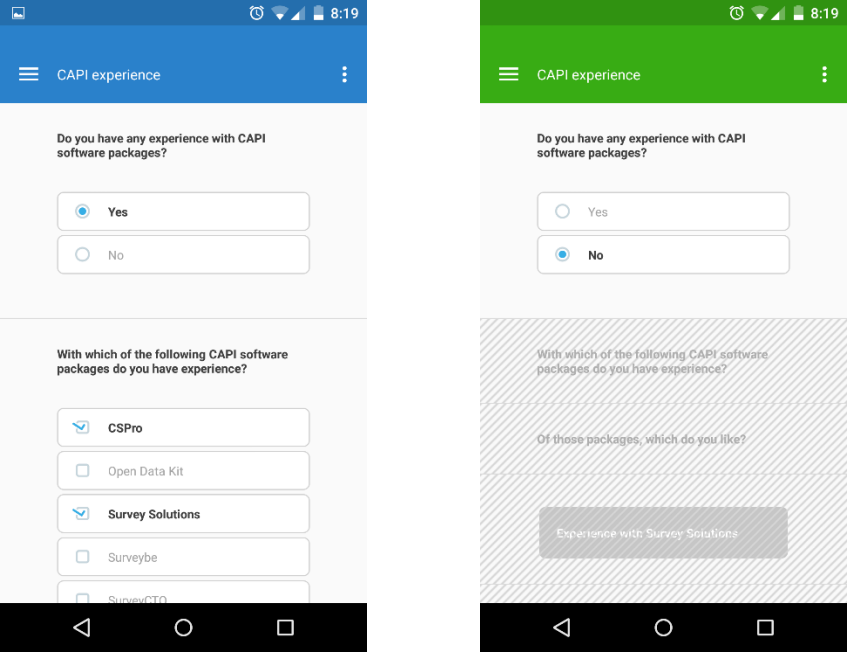


## Buttons for navigating to the next or parent section

The most common interviewer navigation actions, our support team observed, were to move from the current to the next section or from a "child" sub-section to its "parent" section. To make these common actions easiest, Survey Solutions includes a button at the end of each section that will allow interviewers, with a single tap, to move where they mean to go.

To provide information along with this new function, these buttons follow the same color scheme as described above. This allows interviewers to know the status of the section or sub-section to which they are moving.
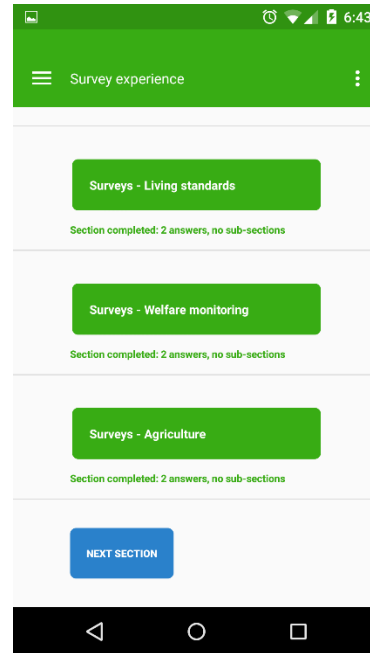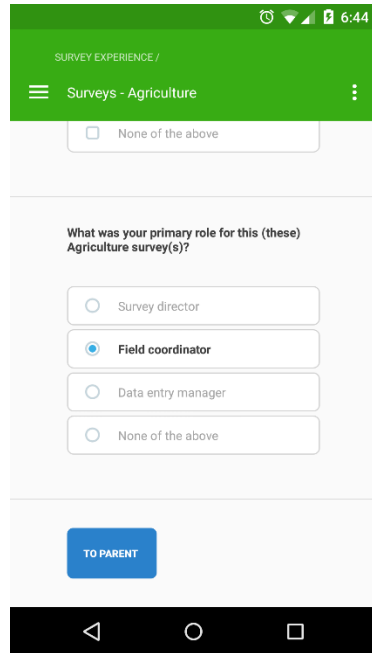
# Improvements to users and assignments management at the Headquarter

## Batch creation of user accounts

Up to 10,000 user accounts can now be created from a single tab-delimited accounts file, which must include the **login**, **password**, and **role** of the user, and may include additional attributes, like *email* or *phone*.

Batch creation of user accounts comes handy when:

- the same accounts need to be replicated on a different server;
- migrating from a different CAPI system with established accounts;
- the survey is so huge that manual creation of accounts via a web interface would take a significant amount of time.

This new functionality of creating user accounts in batch mode is available to both the administrator and the headquarter users. For new supervisor accounts the role must be specified as "Supervisor" (case-sensitive). For interviewer accounts the role must be specified as "Interviewer" (case-sensitive), and in addition the login of the supervisor must be specified, which determined the team where the interviewer account will be added. Interviewers may be added to supervisors already existing in the system, or to new supervisors mentioned anywhere in the users list.

When creating new users with a batch upload feature, select the "*Batch user upload*" menu item of the "*Teams and Roles*" menu.
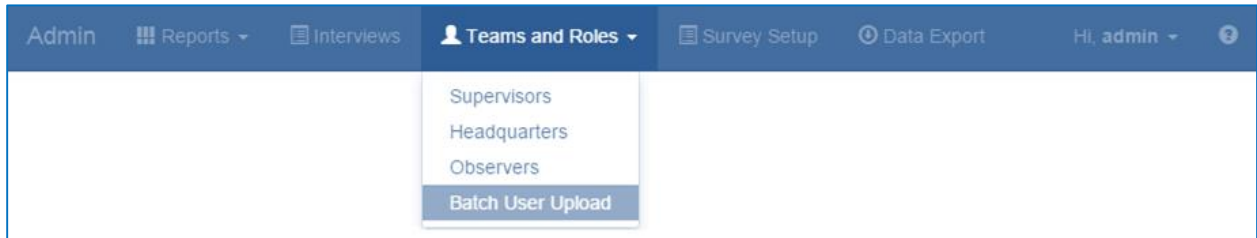


Survey Solutions will present the layout of the file it expects:
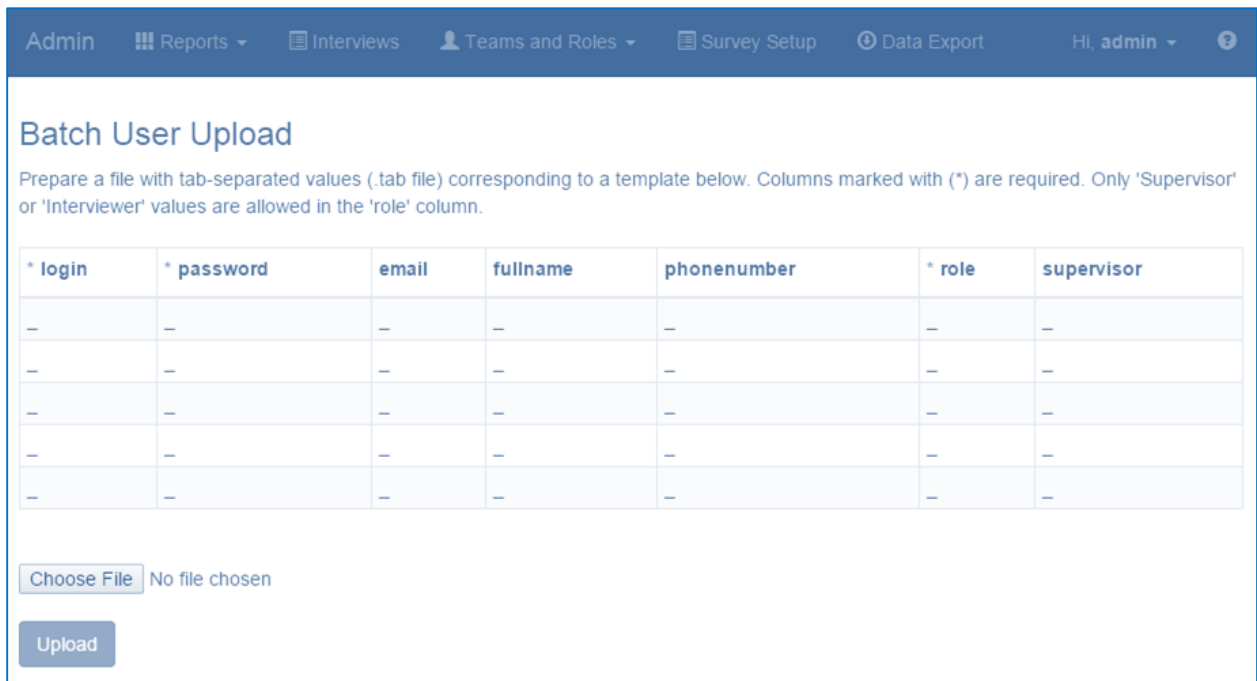


The fields *login*, *password* and *role* are mandatory, and must be filled out for every user in the list. Other fields are optional. Click the "*Choose File*" button to locate the file on your drive which contains the list of the users and click the "*Upload*" button to upload it to the Survey Solutions server.

Survey Solutions will validate the uploaded list of the users report if any problems are found:

- empty required fields (login, password, role);
- passwords not conforming to the security requirements (too short, etc);
- duplicate user accounts;
- unknown supervisors (all interviewers created must become part of the team of a supervisor known to the system);
- and other checks.



If the program didn't find any problems with the list of users, click the "*Create users*" button to start creating accounts in the batch mode. Depending on the number of users and server performance this process may take a few minutes.

## Possibility to archive interviewers and/or supervisors.

We have introduced the possibility to archive interviewers and or supervisors, which can be useful if the server is reused for multiple surveys, during reorganization of the data collection teams and in other situations.

Archived user accounts are not deleted, but remain dormant on the server. Persons, whose accounts were archived can no longer login in to the system or send data to it, and the accounts do not show up in the lists of interviewers and supervisors when assignments are done.

Archived accounts can be later retrieved from the archive if necessary. To access archived supervisor accounts, the headquarter user should proceed to "*Teams and Roles*" menu and select supervisors. Then click the "*Archived supervisors*" icon:
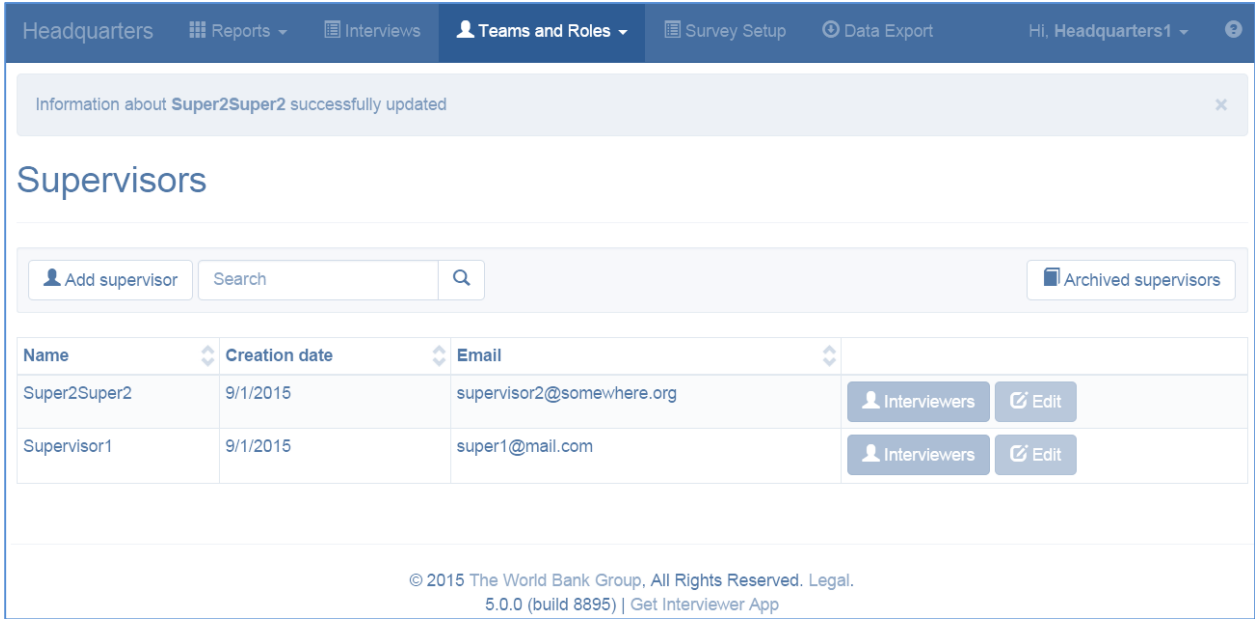


Supervisors have similar functionality to manage their team of interviewers.

## Names and phone numbers for users.

Communication within the teams as well as between the headquarters and individual data collection users is crucial and to facilitate management of contacts we have added a possibility to tie up the contact information for each user:

- Full name
- Email
- Phone number

Note that you can provide the contact information when the user accounts are created manually, and also when the accounts are created in a batch mode. Contact information can be updated later.

## Other changes to Headquarter functionality

The format of export of the GPS question has changed: previously all coordinates were exported into one variable. Now each coordinate (latitude, longitude, altitude and precision) is exported into it's own variable. This simplifies subsequent data processing. Stata users processing data exported from earlier versions of Survey Solutions can use the parseloc command (in Stata type findit parseloc) for the same task.

We have expanded the standard reports, which are available to all headquarter users and they now include helpful statistics on the speed of data collection and measure the turnaround time of assignments. With this information one can better estimate the date of completing the survey or plan the workforce requirements to meet a certain deadline.

# Changes to questionnaire designer and programming language

The designer tool now shows the history of changes to the questionnaire, which is especially useful in the collaborative environment. You can now see whether any of your collaborators has introduced any changes to the questionnaire you have created, and what were those changes.

Designer users now have a possibility to share their questionnaires in the read-only mode. This helps prevent accidental changes. The same questionnaire can be shared with collaborators within the team with edit permissions, and with external reviewers with read-only permissions.

To speed up collaborative work we have introduced notifications: Users that were invited to edit or read a questionnaire by a different user will receive an email notification to the email address that was used during registration.

We have phased out the mandatory attribute which we maintained for compatibility in read-only mode in the previous version. Questionnaire designers can still program the questionnaire logic in accordance with whether a particular question is answered or not, for example, using a new and convenient `IsAnswered(q)` Boolean function (supply a corresponding variable name *q* as an argument), which takes the logical value *true* if the specified question is answered and *false* if it is not answered.

We have furthermore retired the "*Roster Upper Bound*" property for numeric questions. To limit the roster size, questionnaire designers can impose a validation condition on the trigger question.

While programming the validation conditions, one can now use the `self` keyword to refer to the value of the question itself. This improves the mobility of the questions: fewer changes are required when questions are cloned or renamed. Note that the `self` keyword may not be used in the enabling conditions, since the question may not turn itself on or off.

## New guides on the use of functions in Survey Solutions

We have catalogued and described the various Survey Solutions functions that questionnaire designers can use to simplify writing complicated conditions. The new guides cover the following topics:

- String functions;
- List functions;
- Anthropometric Z-score functions;
- Miscellaneous functions.

We recommend exploring the Survey Solutions built-in functions from the functions index.