

# TRANSPORT 4 AQ

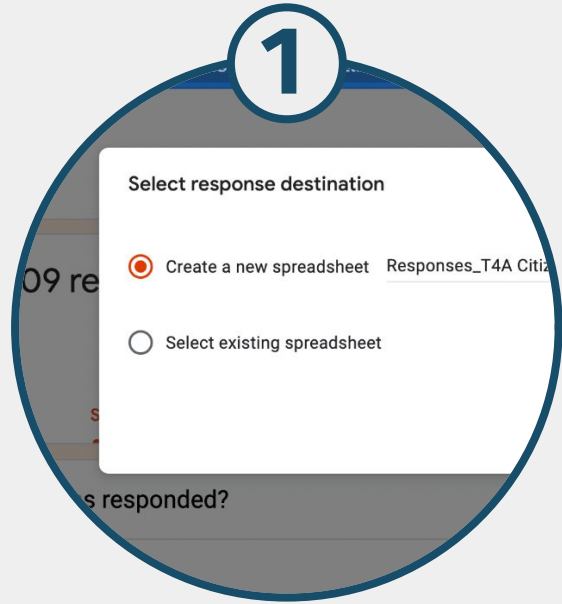
Workshop 2  
Guidance Document

## How to Check Data Quality

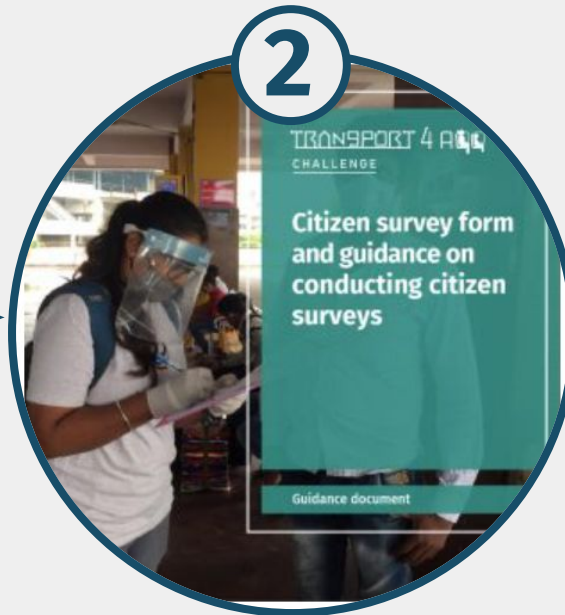
Updated on  
27th July 2021



# Supervisor checks data quality



*Supervisor will export responses as a spreadsheet*



*Use our guide to detect bogus responses*



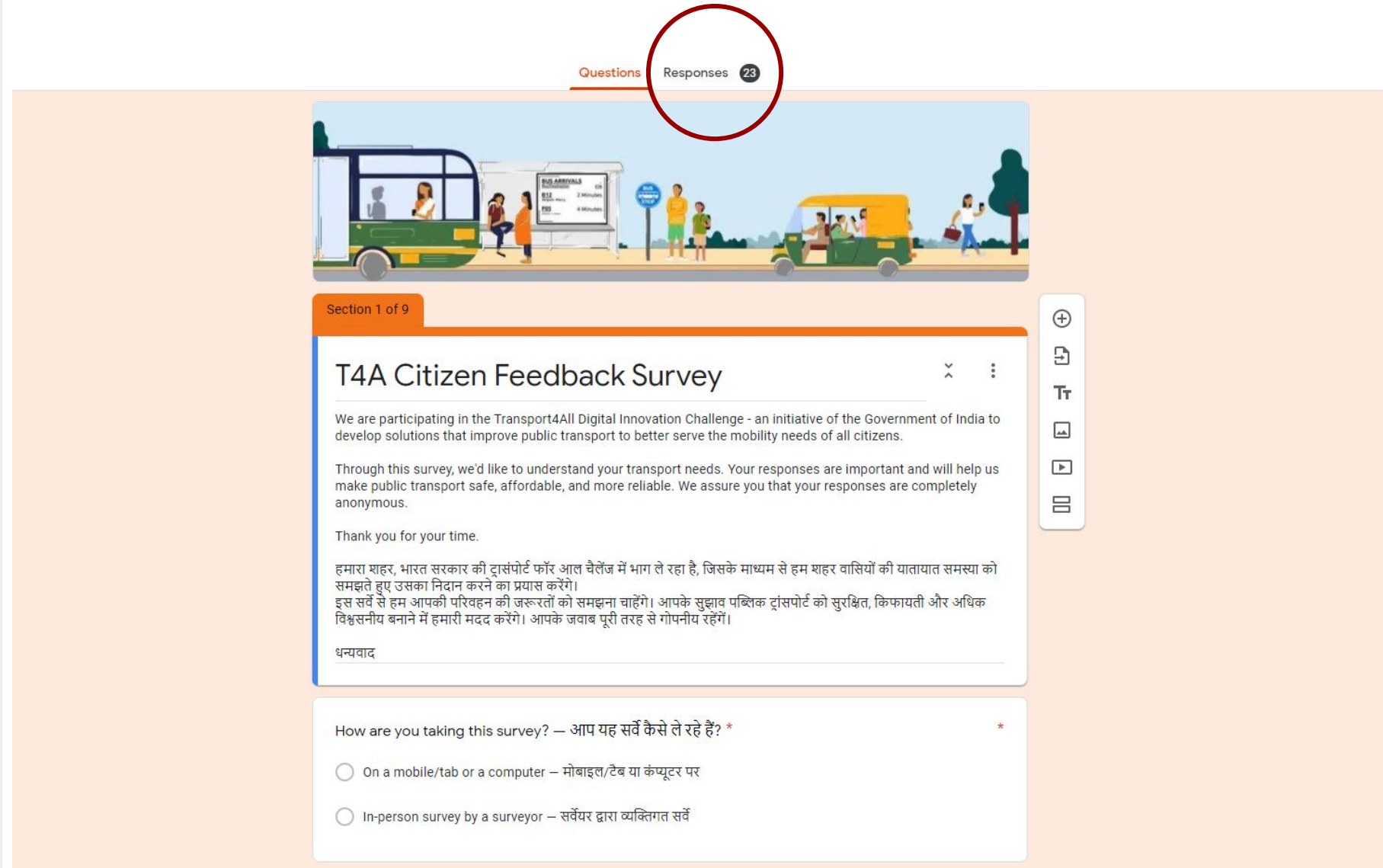
*Delete the bogus responses from the sheet and find a replacement for the surveyor*

## 1. Export responses

# A. Open your survey form

1. Open your citizen survey form
2. After opening the form, **click on responses**

You can also quickly check the progress of your surveys in the response tab



The screenshot displays a survey interface for 'T4A Citizen Feedback Survey'. At the top, there are two tabs: 'Questions' and 'Responses', with 'Responses' being the active tab and showing a count of 23. Below the tabs is a header image depicting a bus stop with a bus, a sign, and people. The main content area is titled 'Section 1 of 9' and contains the following text:

**T4A Citizen Feedback Survey**

We are participating in the Transport4All Digital Innovation Challenge - an initiative of the Government of India to develop solutions that improve public transport to better serve the mobility needs of all citizens.

Through this survey, we'd like to understand your transport needs. Your responses are important and will help us make public transport safe, affordable, and more reliable. We assure you that your responses are completely anonymous.

Thank you for your time.

हमारा शहर, भारत सरकार की ट्रांसपोर्ट फॉर आल चैलेंज में भाग ले रहा है, जिसके माध्यम से हम शहर वासियों की यातायात समस्या को समझते हुए उसका निदान करने का प्रयास करेंगे। इस सर्वे से हम आपकी परिवहन की जरूरतों को समझना चाहेंगे। आपके सुझाव पब्लिक ट्रांसपोर्ट को सुरक्षित, किफायती और अधिक विश्वसनीय बनाने में हमारी मदद करेंगे। आपके जवाब पूरी तरह से गोपनीय रहेंगे।

धन्यवाद

How are you taking this survey? — आप यह सर्वे कैसे ले रहे हैं? \*

- On a mobile/tab or a computer — मोबाइल/टैब या कंप्यूटर पर
- In-person survey by a surveyor — सर्वेयर द्वारा व्यक्तिगत सर्वे

## 1. Export responses

# B. Create a google sheet

1. In the form title, click on the green plus icon in the to left corner
2. In the dialogue box that opens, select **“Create a new spreadsheet”**

The screenshot shows the 'Responses' tab of a Google Form. At the top, there are tabs for 'Questions' and 'Responses' (with a '23' badge). A green plus icon in the top-left corner is circled in red and labeled '1.'. Below the tabs, there is a question: 'this survey? — आप यह सर्वे कैसे ले रहे हैं?'. A pie chart shows the distribution of responses: 95.7% for 'In-person survey by a surveyor' (red) and 4.3% for 'On a mobile/tab or a computer' (blue). A legend to the right of the chart explains the categories. At the bottom, there is a section for a QR code labeled 'यि र कोड'.

The screenshot shows a dialog box titled 'Select response destination' with a close button (X) in the top-right corner. The dialog has two options: 'Create a new spreadsheet' (selected with a red radio button) and 'Select existing spreadsheet'. The 'Create a new spreadsheet' option is highlighted with a red box and labeled '2.'. The text 'T4A Citizen Survey (Responses)' is visible next to the selected option, along with a 'Learn More' link. At the bottom right of the dialog are 'Cancel' and 'Create' buttons. Below the dialog, a 'Loading responses...' indicator is visible.

# C. Download the excel sheet

## 1. Export responses

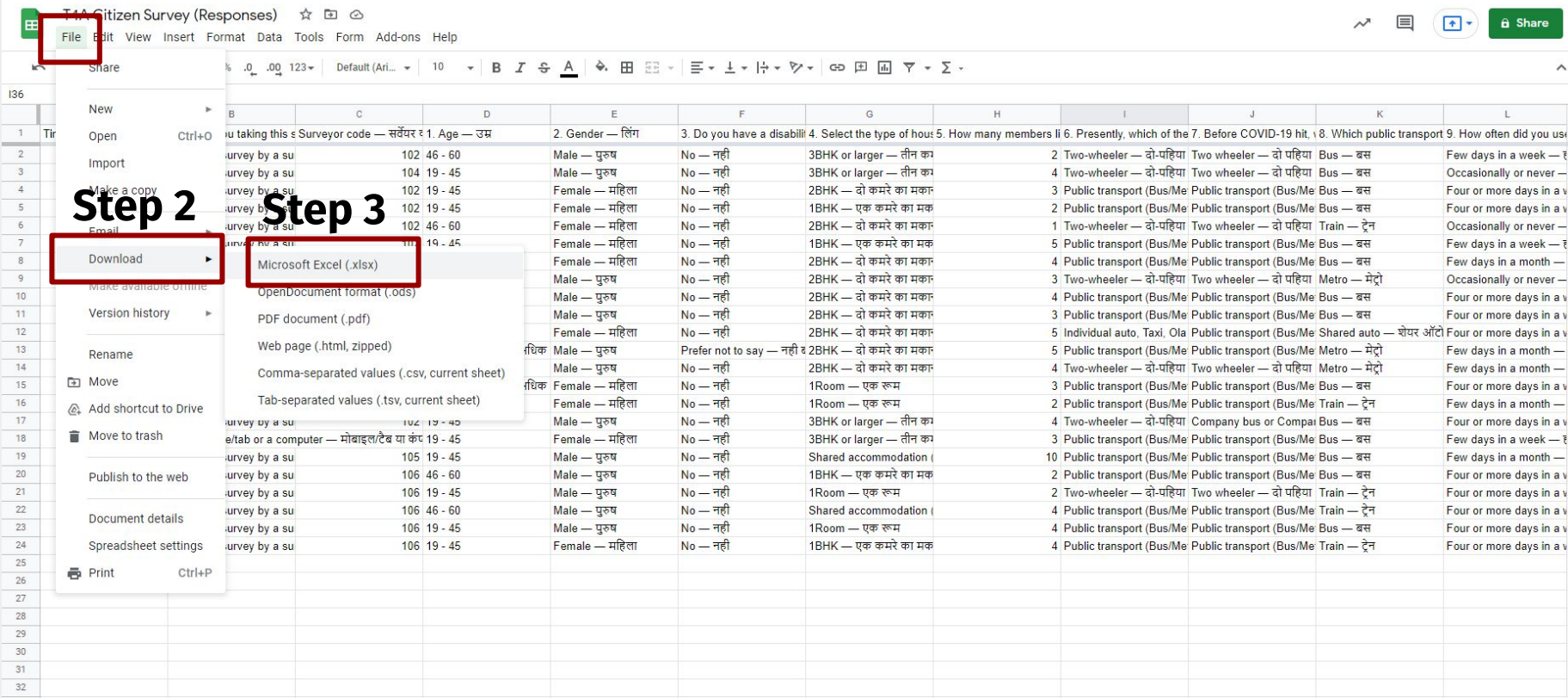
**Step 1:** In the google sheet, click on **“File”**

**Step 2:** Next click on **“Download”**

**Step 3:** Select **Microsoft Excel (.xlsx)**

**Step 4:** Open the downloaded file

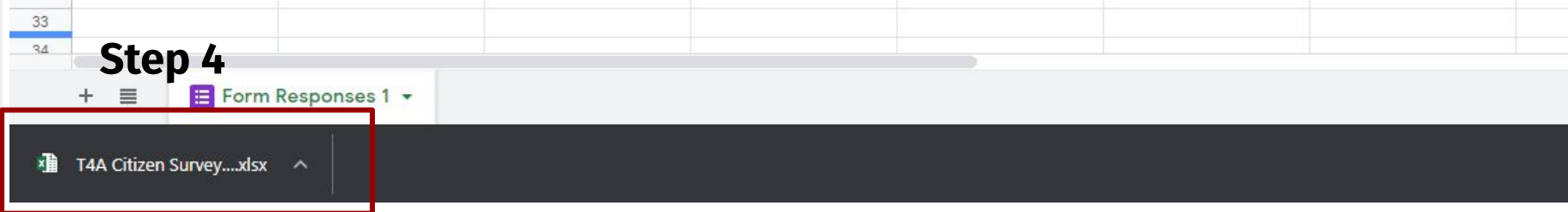
### Step 1



### Step 2

### Step 3

### Step 4



## 1. Export responses

After opening the sheet, a warning will appear in a yellow ribbon. **Click on “Enable Editing”**

# D. Open the excel sheet with survey responses

T4A Citizen Survey (Responses).xlsx [Protected View] - Excel

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do...

PROTECTED VIEW Be careful—files from the Internet can contain viruses. Unless you need to edit, it's safer to stay in Protected View. **Enable Editing**

A1 Timestamp

	A	B	C	D	E	F	G
1	Timestamp	How are you taking this s	Surveyor code — सर्वेयर क	1. Age — उम्र	2. Gender — लिंग	3. Do you have a disability	4. Select the type of hous
2	7-22-2021 14:42:04	In-person survey by a sun	102	46 - 60	Male — पुरुष	No — नहीं	3BHK or larger — तीन कम
3	7-22-2021 14:52:38	In-person survey by a sun	104	19 - 45	Male — पुरुष	No — नहीं	3BHK or larger — तीन कम
4	7-22-2021 14:58:17	In-person survey by a sun	102	19 - 45	Female — महिला	No — नहीं	2BHK — दो कमरे का मकान
5	7-22-2021 15:05:12	In-person survey by a sun	102	19 - 45	Female — महिला	No — नहीं	1BHK — एक कमरे का मका
6	7-22-2021 15:15:22	In-person survey by a sun	102	46 - 60	Female — महिला	No — नहीं	2BHK — दो कमरे का मकान
7	7-22-2021 15:20:51	In-person survey by a sun	102	19 - 45	Female — महिला	No — नहीं	1BHK — एक कमरे का मका
8	7-22-2021 15:29:34	In-person survey by a sun	102	19 - 45	Female — महिला	No — नहीं	2BHK — दो कमरे का मकान
9	7-22-2021 15:34:00	In-person survey by a sun	102	19 - 45	Male — पुरुष	No — नहीं	2BHK — दो कमरे का मकान
10	7-22-2021 15:46:03	In-person survey by a sun	102	46 - 60	Male — पुरुष	No — नहीं	2BHK — दो कमरे का मकान
11	7-22-2021 15:51:14	In-person survey by a sun	102	46 - 60	Male — पुरुष	No — नहीं	2BHK — दो कमरे का मकान
12	7-22-2021 16:08:13	In-person survey by a sun	102	46 - 60	Female — महिला	No — नहीं	2BHK — दो कमरे का मकान
13	7-22-2021 16:14:26	In-person survey by a sun	102	Above 60 — 60 से अधिक	Male — पुरुष	Prefer not to say — नहीं ब	2BHK — दो कमरे का मकान
14	7-22-2021 16:19:09	In-person survey by a sun	102	46 - 60	Male — पुरुष	No — नहीं	2BHK — दो कमरे का मकान
15	7-22-2021 16:36:11	In-person survey by a sun	105	Above 60 — 60 से अधिक	Female — महिला	No — नहीं	1Room — एक रूम
16	7-22-2021 16:41:43	In-person survey by a sun	105	46 - 60	Female — महिला	No — नहीं	1Room — एक रूम
17	7-22-2021 16:44:37	In-person survey by a sun	102	19 - 45	Male — पुरुष	No — नहीं	3BHK or larger — तीन कम
18	7-22-2021 17:40:49	On a mobile/tab or a computer — मोबाइल/टैब या कंप्यू	102	19 - 45	Female — महिला	No — नहीं	3BHK or larger — तीन कम
19	7-22-2021 19:45:35	In-person survey by a sun	105	19 - 45	Male — पुरुष	No — नहीं	Shared accommodation (f
20	7-23-2021 11:24:12	In-person survey by a sun	106	46 - 60	Male — पुरुष	No — नहीं	1BHK — एक कमरे का मका
21	7-23-2021 11:37:46	In-person survey by a sun	106	19 - 45	Male — पुरुष	No — नहीं	1Room — एक रूम
22	7-23-2021 11:59:58	In-person survey by a sun	106	46 - 60	Male — पुरुष	No — नहीं	Shared accommodation (f
23	7-23-2021 12:19:57	In-person survey by a sun	106	19 - 45	Male — पुरुष	No — नहीं	1Room — एक रूम
24	7-23-2021 12:49:40	In-person survey by a sun	106	19 - 45	Female — महिला	No — नहीं	1BHK — एक कमरे का मका
25							

# 1. Export responses

- 1. Select the survey responses from your survey sheet
- 2. And press “Ctrl+C” to copy them

Note : Make sure that “—” separate your english and regional language text

# E. Copying the survey responses

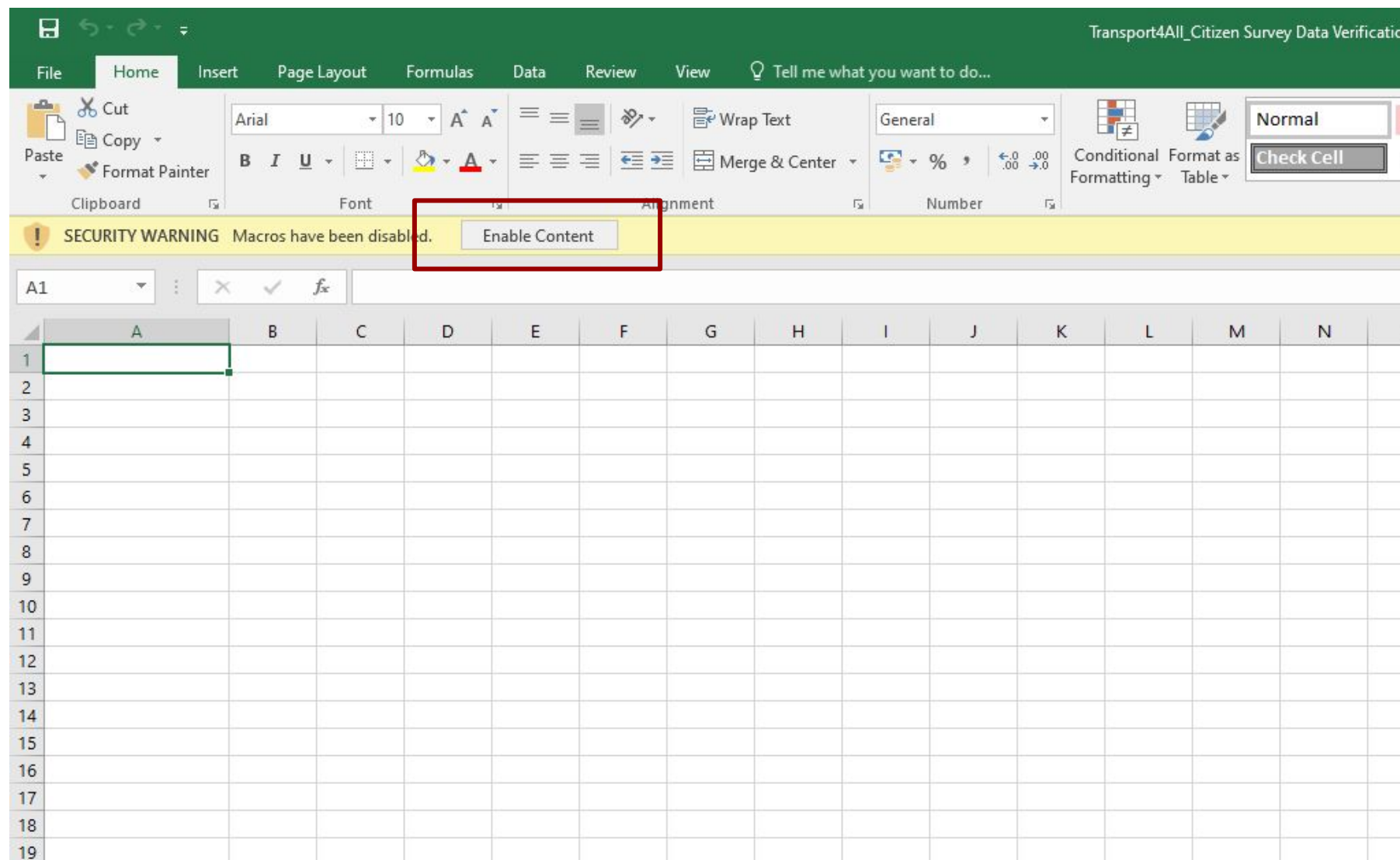
Timestamp	How are you taking this s	Surveyor code — सर्वेयर क	1. Age — उम्र	2. Gender — लिंग	3. Do you have a disability	4. Select the type of hous	5. How
7-22-2021 14:42:04	In-person survey by a sun	102	46 - 60	Male — पुरुष	No — नहीं	3BHK or larger — तीन कम	
7-22-2021 14:52:38	In-person survey by a sun	104	19 - 45	Male — पुरुष	No — नहीं	3BHK or larger — तीन कम	
7-22-2021 14:58:17	In-person survey by a sun	102	19 - 45	Female — महिला	No — नहीं	2BHK — दो कमरे का मकान	
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7-22-2021 15:15:22	In-person survey by a sun	102	46 - 60	Female — महिला	No — नहीं	2BHK — दो कमरे का मकान	
7-22-2021 15:20:51	In-person survey by a sun	102	19 - 45	Female — महिला	No — नहीं	1BHK — एक कमरे का मका	
7-22-2021 15:29:34	In-person survey by a sun	102	19 - 45	Female — महिला	No — नहीं	2BHK — दो कमरे का मकान	
7-22-2021 15:34:00	In-person survey by a sun	102	19 - 45	Male — पुरुष	No — नहीं	2BHK — दो कमरे का मकान	
7-22-2021 15:46:03	In-person survey by a sun	102	46 - 60	Male — पुरुष	No — नहीं	2BHK — दो कमरे का मकान	
7-22-2021 15:51:14	In-person survey by a sun	102	46 - 60	Male — पुरुष	No — नहीं	2BHK — दो कमरे का मकान	
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7-22-2021 16:14:26	In-person survey by a sun	102	Above 60 — 60 से अधिक	Male — पुरुष	Prefer not to say — नहीं ब	2BHK — दो कमरे का मकान	
7-22-2021 16:19:09	In-person survey by a sun	102	46 - 60	Male — पुरुष	No — नहीं	2BHK — दो कमरे का मकान	
7-22-2021 16:36:11	In-person survey by a sun	105	Above 60 — 60 से अधिक	Female — महिला	No — नहीं	1Room — एक रूम	
7-22-2021 16:41:43	In-person survey by a sun	105	46 - 60	Female — महिला	No — नहीं	1Room — एक रूम	
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7-22-2021 17:40:49	On a mobile/tab or a computer — मोबाइल/टैब या कंप्यू	102	19 - 45	Female — महिला	No — नहीं	3BHK or larger — तीन कम	
7-22-2021 19:45:35	In-person survey by a sun	105	19 - 45	Male — पुरुष	No — नहीं	Shared accommodation (f	
7-23-2021 11:24:12	In-person survey by a sun	106	46 - 60	Male — पुरुष	No — नहीं	1BHK — एक कमरे का मका	
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7-23-2021 11:59:58	In-person survey by a sun	106	46 - 60	Male — पुरुष	No — नहीं	Shared accommodation (f	
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7-23-2021 12:49:40	In-person survey by a sun	106	19 - 45	Female — महिला	No — नहीं	1BHK — एक कमरे का मका	

## 2. Using the guide to detect bogus responses

[Download the guide by clicking here!](#)

1. Open the guide named “Transport4All\_Citizen Survey Data Verification Toolkit”
2. After opening the sheet, a warning will appear in a yellow ribbon. **Click on “Enable Editing”**
3. When prompted again, **click on “Enable Content”**

## A. Opening the data verification toolkit



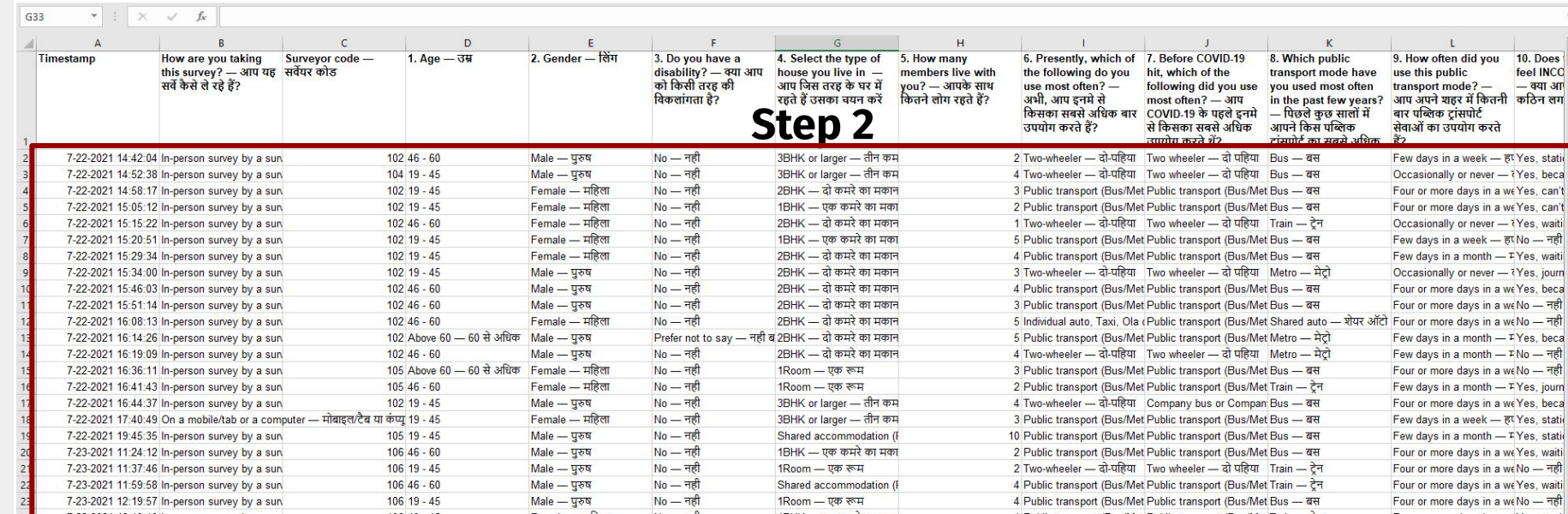
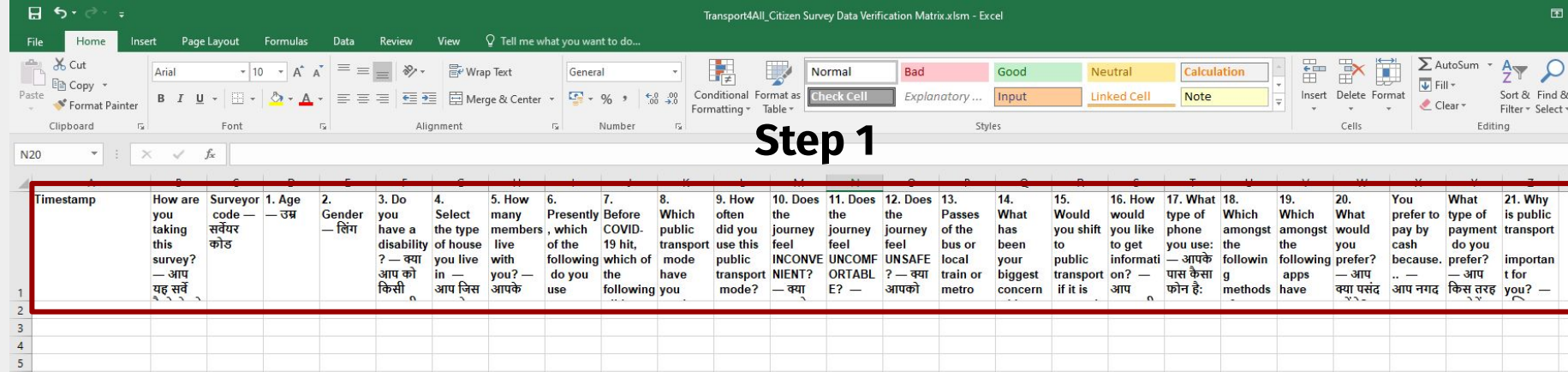


## 2. Using the guide to detect bogus responses

# B. Inputting the survey data

**Step 1:** Verify that your questions are in the same order as given in the verification sheet

**Step 2:** Paste the data according to the ordering of the questions by pressing "Ctrl+V"



**PASTE THE RESPONSES AS PER THE QUESTIONS GIVEN IN THE VERIFICATION SHEET!!**

**If you have added any new column like Email Id, please paste it after question no. 21-- after column AA**

## 2. Using the guide to detect bogus responses

# C. Verifying the data

**Step 1:** Click on “Final Analysis” tab

**Step 2:** Click on the “Verify Survey Data” button

**Step 3:** Wait for 5-10 minutes while it runs the analysis.

The sheet might freeze multiple times during this process, please don't close it.

Transport4All\_Citizen Survey Data Verification Toolkit.xlsx - Excel

File Home Insert Page Layout Formulas Data Review View Developer Tell me what you want to do...

Clipboard Font Alignment Number Styles

Normal Bad Good Neutral Calculation  
Check Cell Explanatory... Input Linked Cell Note

**Step 2**

Verify Survey Data

Remove Bogus Responses  
(if more than 5% of bogus responses detected)

Proceed with Analysis  
(if less than 5% of bogus responses detected)

1	Surveyor Code	Test 1	Test 2	No of Overall False Responses			
2	0	--		No of total in-person responses	No of bogus responses	Percentage of responses	
3	0	00:00:00		Bogus Responses	0	0	#DIV/0!
4	0	00:00:00		Responses need verification	0	0	#DIV/0!
5	0	00:00:00		Correct responses	0	0	#DIV/0!
6	0	00:00:00					
7	0	00:00:00		No of False Responses by Surveyor Code			
8	Surveyor Code	No of total in-person responses	No of bogus responses	Percentage of responses			
9	0	00:00:00		Grand Total	0	0	#DIV/0!
10	0	00:00:00		Surveyor Code			
11	0	00:00:00		106	0	0	#DIV/0!
12	0	00:00:00		105	0	0	#DIV/0!
13	0	00:00:00		104	0	0	#DIV/0!
14	0	00:00:00		102	0	0	#DIV/0!
15	0	00:00:00		0	0	0	#DIV/0!
16	0	00:00:00		0	0	0	#DIV/0!
17	0	00:00:00		0	0	0	#DIV/0!
18	0	00:00:00		0	0	0	#DIV/0!
19	0	00:00:00		0	0	0	#DIV/0!
20	0	00:00:00		0	0	0	#DIV/0!
21	0	00:00:00		0	0	0	#DIV/0!
22	0	00:00:00		0	0	0	#DIV/0!
23	0	00:00:00		0	0	0	#DIV/0!
24	0	00:00:00		0	0	0	#DIV/0!
25	0	00:00:00		0	0	0	#DIV/0!
26	0	00:00:00		0	0	0	#DIV/0!
27	0	00:00:00		0	0	0	#DIV/0!
28	0	00:00:00		0	0	0	#DIV/0!
29	0	00:00:00		0	0	0	#DIV/0!
30	0	00:00:00		0	0	0	#DIV/0!
31	0	00:00:00		0	0	0	#DIV/0!
32	0	00:00:00		0	0	0	#DIV/0!

**Step 1**

Raw Data Filtered Data **Final Analysis** Corrected Data Charts

## 2. Using the guide to detect bogus responses

# C. Verifying the data (In case of an error)

1. **In case of an error**, click on **“End”**
2. Go back to **“Final Analysis”** tab
3. Repeat the steps in the previous page again.

The screenshot displays a data analysis software interface. At the top, there are menu options: 'Look Views', 'Show', 'Zoom', 'Window', and 'Macros'. Below these is a toolbar with icons for 'X', 'checkmark', and 'fx', along with a 'Timestamp' field. The main area is a data table with columns labeled B through T. The first few columns contain survey data such as 'How are you', 'Surveyor code', '1. Age', '2. Gender', '3. Do you', '4. Select t', '5. How ma', '6. Present', '7. Before C', '8. Which p', '9. How oft', '10. Does t', '11. Does t', '12. Does t', '13. Passe', '14. What f', '15. Would', '16. How w', and '17. What t'. The data rows contain various responses, some with '#####' indicating missing or invalid data. A 'Microsoft Visual Basic' dialog box is overlaid on the table, displaying the error message: 'Run-time error '91': Object variable or With block variable not set'. The dialog box has four buttons: 'Continue', 'End', 'Debug', and 'Help'. The 'End' button is highlighted with a red box. At the bottom of the interface, there is a navigation bar with tabs: 'Raw Data', 'Filtered Data', 'Final Analysis', 'Corrected Data', and 'Charts'. The 'Final Analysis' tab is highlighted with a red box. Below the navigation bar, the text 'Step 2' is written in large, bold, black font.

Step 2

## 2. Using the guide to detect bogus responses

# D. Checking the data quality

**Step 1:** Click on “Final Analysis” sheet

**Step 2:** Check the overall percentage of bogus responses. This should be less than 5%

**Step 3:** Check the bogus responses by surveyor

**DO NOT CHANGE** any formula in this document

	A	B	C	D	E	F	G	H	I	J	K
1	Surveyor Code	Test 1	Test 2			No of Overall False Responses					
2	106	--				No of total in-person responses	No of bogus responses	Percentage of responses			
3	106	00:13:34				Bogus Responses	22	2	9%		
4	106	00:22:12				Responses need verification	22	5	23%		
5	106	00:20:00				Correct responses	22	11	50%		
6	106	00:29:42									
7	105	#####				No of False Responses by Surveyor Code					
8	105	00:05:32				Surveyor Code	No of total in-person responses	No of bogus responses	Percentage of responses		
9	105	03:03:52				Grand Total	22	2	9%		
10	104	#####				Surveyor Code					
11	102	#####				106	5	0	0%		
12	102	00:16:13				105	3	0	0%		
13	102	00:06:55				104	1	0	0%		
14	102	00:10:09				102	13	2	15%		
15	102	00:05:29				0	0	0	#DIV/0!		
16	102	00:08:43				0	0	0	#DIV/0!		
17	102	00:04:26				0	0	0	#DIV/0!		
18	102	00:12:03				0	0	0	#DIV/0!		
19	102	00:05:10				0	0	0	#DIV/0!		
20	102	00:16:59				0	0	0	#DIV/0!		
21	102	00:06:13				0	0	0	#DIV/0!		
22	102	00:04:43				0	0	0	#DIV/0!		
23	102	00:25:27				0	0	0	#DIV/0!		
24	0	#####				0	0	0	#DIV/0!		
25	0	00:00:00				0	0	0	#DIV/0!		
26	0	00:00:00				0	0	0	#DIV/0!		
27	0	00:00:00				0	0	0	#DIV/0!		
28	0	00:00:00				0	0	0	#DIV/0!		
29	0	00:00:00				0	0	0	#DIV/0!		
30	0	00:00:00				0	0	0	#DIV/0!		
31	0	00:00:00				0	0	0	#DIV/0!		
32	0	00:00:00				0	0	0	#DIV/0!		

**Step 1:** Click on “Final Analysis” sheet

**Step 2:** Check the overall percentage of bogus responses. This should be less than 5%

**Step 3:** Check the bogus responses by surveyor

## 2. Using the guide to detect bogus responses

# D1. Discarding the bogus responses (if bogus response is more than 5%)

**Step 1:** Click on “Final Analysis” tab

**Step 2:** Check if If you more than 5% of the data is Bogus.

**Step 3:** Click on the “Remove Bogus Responses” button

**Step 4:** Wait for 2-5 minutes while it runs the analysis.

**The sheet might freeze multiple times during this process, but don't close it.**

**Step 2**

No of Overall False Responses			
	No of total in-person responses	No of bogus responses	Percentage of responses
Bogus Responses	22	2	9%
Responses need verification	22	5	23%
Correct responses	22	11	50%

No of False Responses by Surveyor Code			
Surveyor Code	No of total in-person responses	No of bogus responses	Percentage of responses
Grand Total	22	2	9%
Surveyor Code			
106	5	0	0%
105	3	0	0%
104	1	0	0%
102	13	2	15%

**Step 1**

Final Analysis | Corrected Data

Transport4All\_Citizen Survey Data Verification lookit.xlsx - Excel

Tell me what you want to do...

General | Normal | Bad | Good | Neutral | Calculation | Check Cell | Explanatory ... | Input | Linked Cell | Note

No of Overall False Responses	
No of bogus responses	Percentage of responses
0	#DIV/0!
0	#DIV/0!
0	#DIV/0!

**Step 3**

Verify Survey Data

Remove Bogus Responses  
(if more than 5% of bogus responses detected)

Proceed with Analysis  
(if less than 5% of bogus responses detected)

## 2. Using the guide to detect bogus responses

# D2. Proceeding to data analysis, (only if bogus response is less than 5%)

**Step 1:** Click on “Final Analysis” tab

**Step 2:** Check if **less than 5%** of data is bogus.

**Step 3:** Click on the “Proceed with Analysis” button

**Step 4:** Wait for 2-5 minutes while it runs the analysis.

**The sheet might freeze multiple times during this process, but don't close it.**

**Step 2**

No of Overall False Responses			
	No of total in-person responses	No of bogus responses	Percentage of responses
Bogus Responses	22	2	9%
Responses need verification	22	5	23%
Correct responses	22	11	50%

No of False Responses by Surveyor Code			
Surveyor Code	No of total in-person responses	No of bogus responses	Percentage of responses
Grand Total	22	2	9%
Surveyor Code			
106	5	0	0%
105	3	0	0%
104	1	0	0%
102	13	2	15%

**Step 1**

Final Analysis

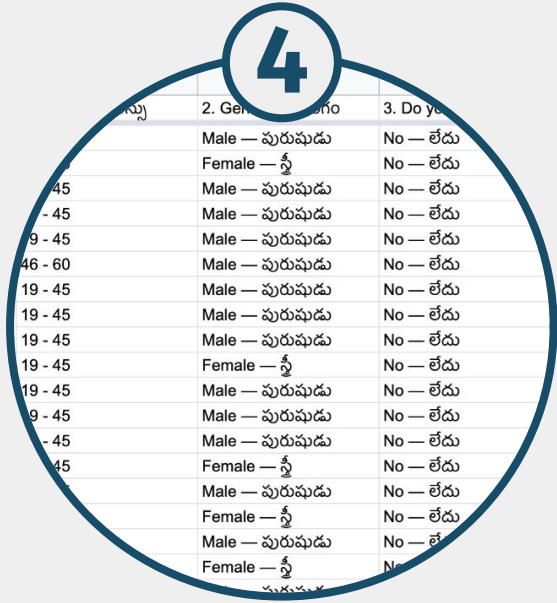
Verify Survey Data

Remove Bogus Responses  
(if more than 5% of bogus responses detected)

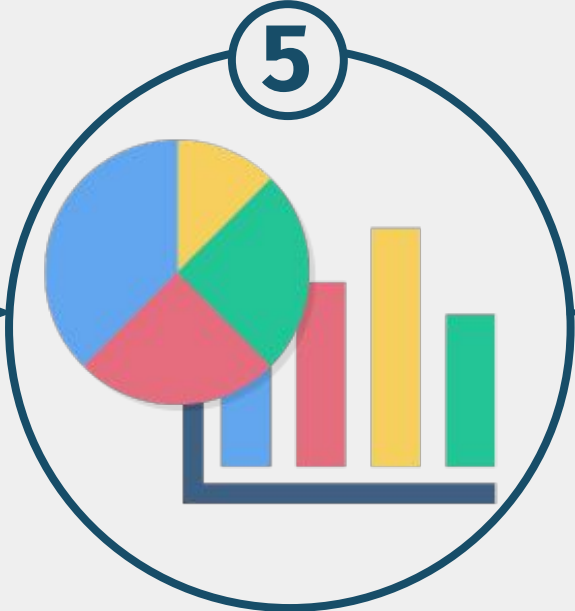
**Proceed with Analysis**  
(if less than 5% of bogus responses detected)

**Step 3**

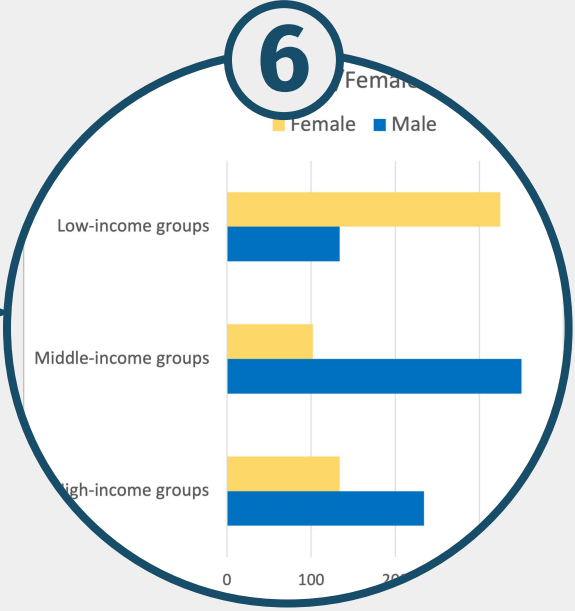
# Supervisor checks target status



*Supervisor inputs the cleaned data everyday*



*Checks the auto-generated charts*



*Compares it to the overall target.*

*Sets fresh target each day to achieve the overall target*

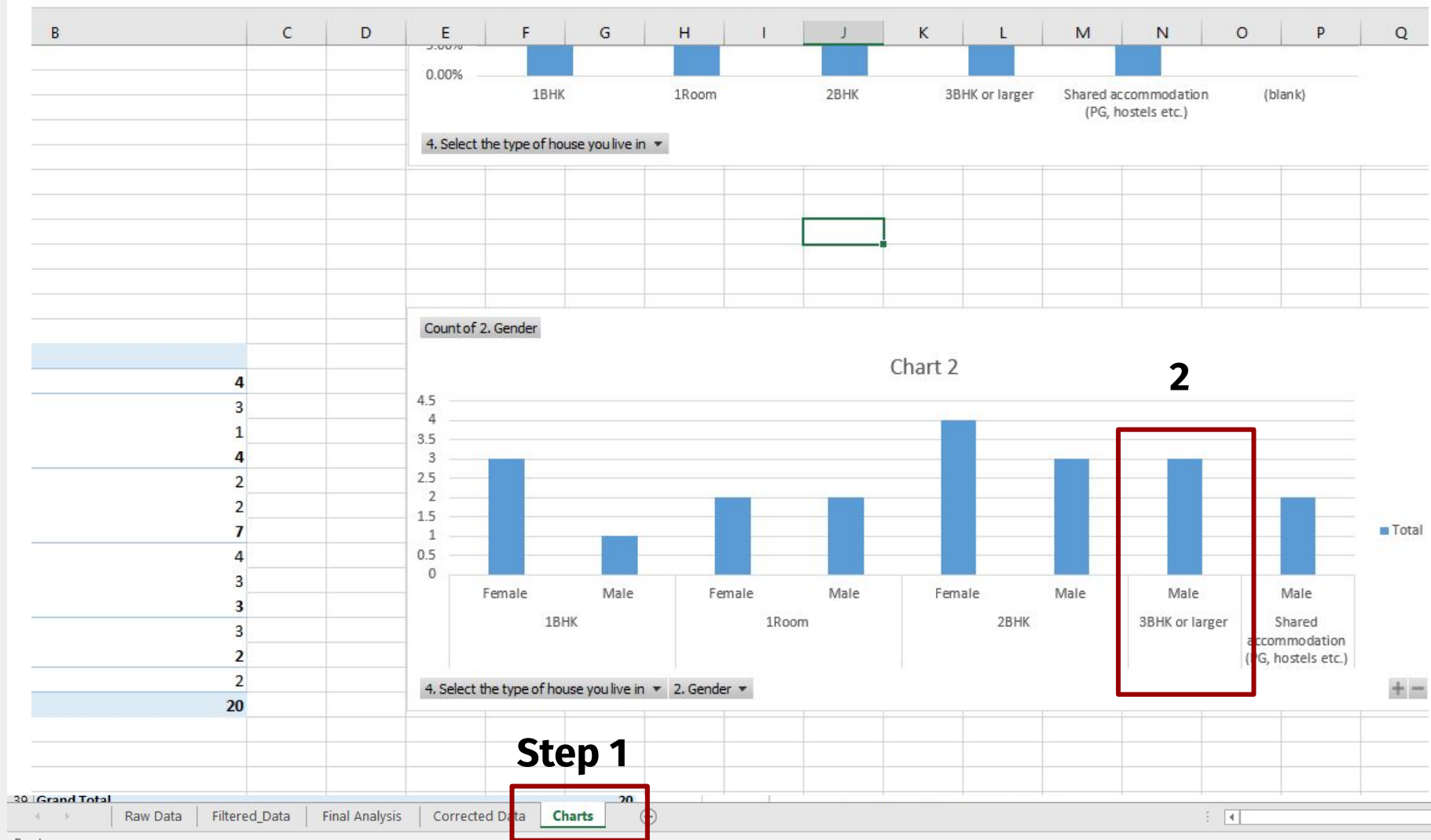
### 3. Analyzing the survey data

## A. Checking the auto-generated charts and compare it to the overall targets

**Step 1:** Click on “**Charts**” tab in the excel sheet

**Step 2:** Check all 4 auto-generated charts to make sure the sample is distributed equally among all **income groups, gender and age**. For example in this case, no females were interviewed in high-income households

**Step 3:** Make sure there is representation from people with disabilities as well. (Check chart 4)





**Repeat** these steps **every day** till the overall target is reached with authentic data

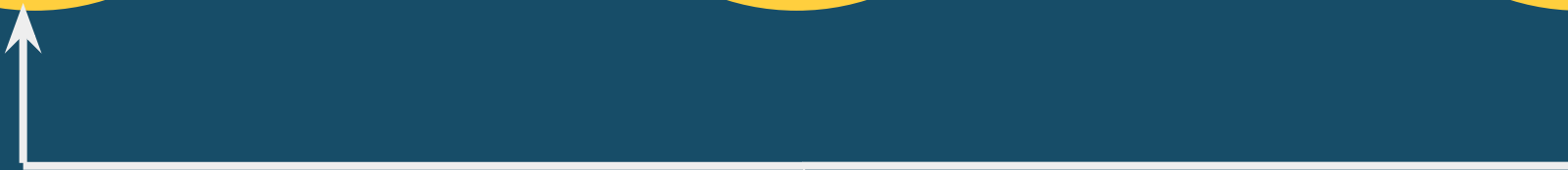
Collect Data



Verify data



Remove Bogus Responses





# TRANSPORT 4 ALL

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[contact@transport4all.in](mailto:contact@transport4all.in) for any queries