

# CREATING THE ELECTRONIC KSA VOTING FORM

This document will provide step-by-step directions to convert the KSA+T voting Excel spreadsheet into an online form that allows everyone in the room and online to vote virtually. This eliminates the need for time-consuming hand counts of the votes. This new online format still retains the familiar KSA+T voting format of 4, 3, 2, 1 (4 – Most Important, 1 – Least Important). Updated August 2023.

Companion video tutorial on YouTube (14 minutes): <https://youtu.be/rVr65ycNlc8>

Things you will need:

- A Google account.
- A list of KSA+Ts you gathered for your meeting.
- A “clear” web browser with no open tabs, as this process will open several new browser tabs. Do not close any of the tabs created by Google as you will need to access them during this process.
- Familiarity with basic Excel functions, formulas, and formatting.
- Time.

Categories covered:

- I. Creating the Google Form that will collect the votes from your BILT members.
- II. Linking the Google Form to the Google Sheet.
- III. Formatting the Voting and Tabulation Functions.
- IV. Testing the Form.

## I. Creating the Google Form

Go back to Google Drive; to do so, go up to the tabs in your web browser. Reminder: do not close any of the tabs that Google has opened during this process.

In your web browser click on the “My Drive – Google Drive” tab:

Once there, you will click on the “+New” button on the Google Drive page. Select “Google Forms” if you do not see it listed select “More” and then select “Google Forms.”

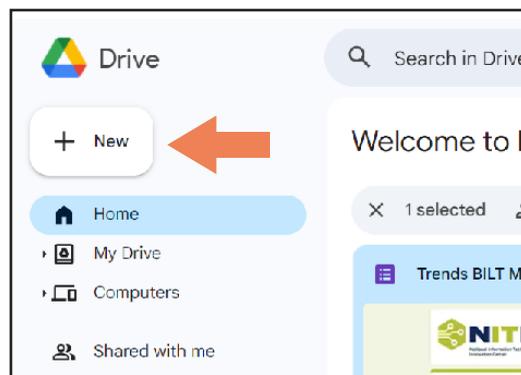


Figure 30: Selecting “New.”

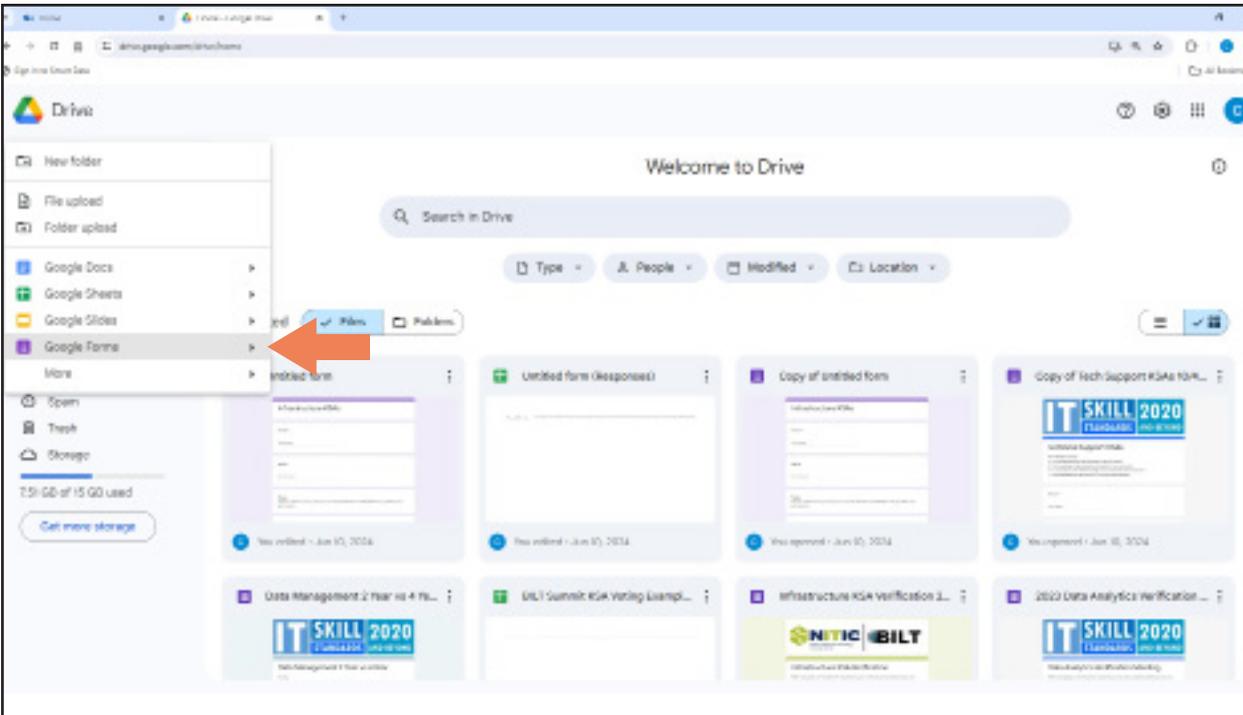


Figure 31: Selecting "Google Forms."

This is the "Untitled form" screen that will pop up:

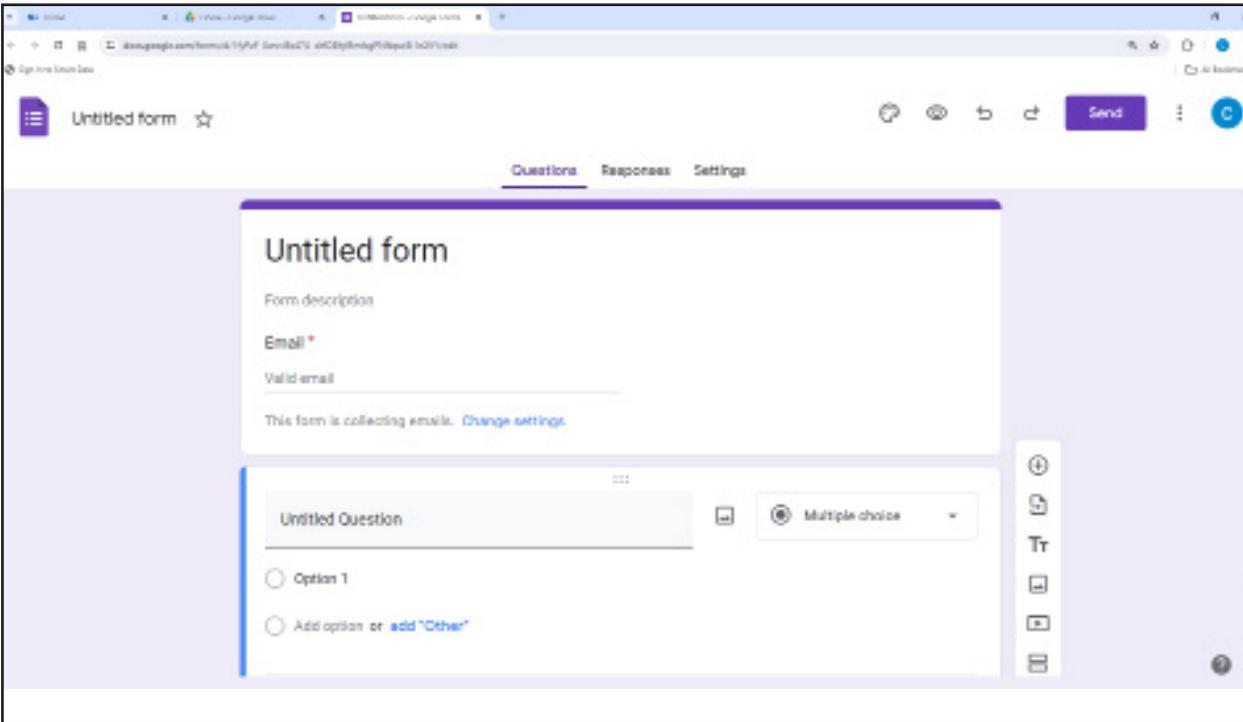


Figure 32: Google's untitled form.

Now you are ready to start building the form, question by question. Each KSA+T line item from your gathered list of KSA+Ts will become its own question on this Google Form.

There are three essential pieces that must be included in the Google form for the voting to work properly.

- Collect email address.
- Name (should be first question).
- KSA item numbering.

To direct Google to automatically send respondents a copy of their voting responses, follow these simple steps.

1. Go to the Google Form you will be using for voting.
2. Click on the “Settings” tab at the top of the screen.
3. The “Settings” menu will appear. Scroll down to the “Responses” section.
4. In that menu, under “Collect email addresses,” select “Responder input” and under “Send responders a copy of their response,” select “Always.”

This setting change will automatically e-mail your voters a copy of their voting responses. Without this, BILT members may not remember their vote during the discussion.

Your changes to the “Settings” menu are saved automatically.

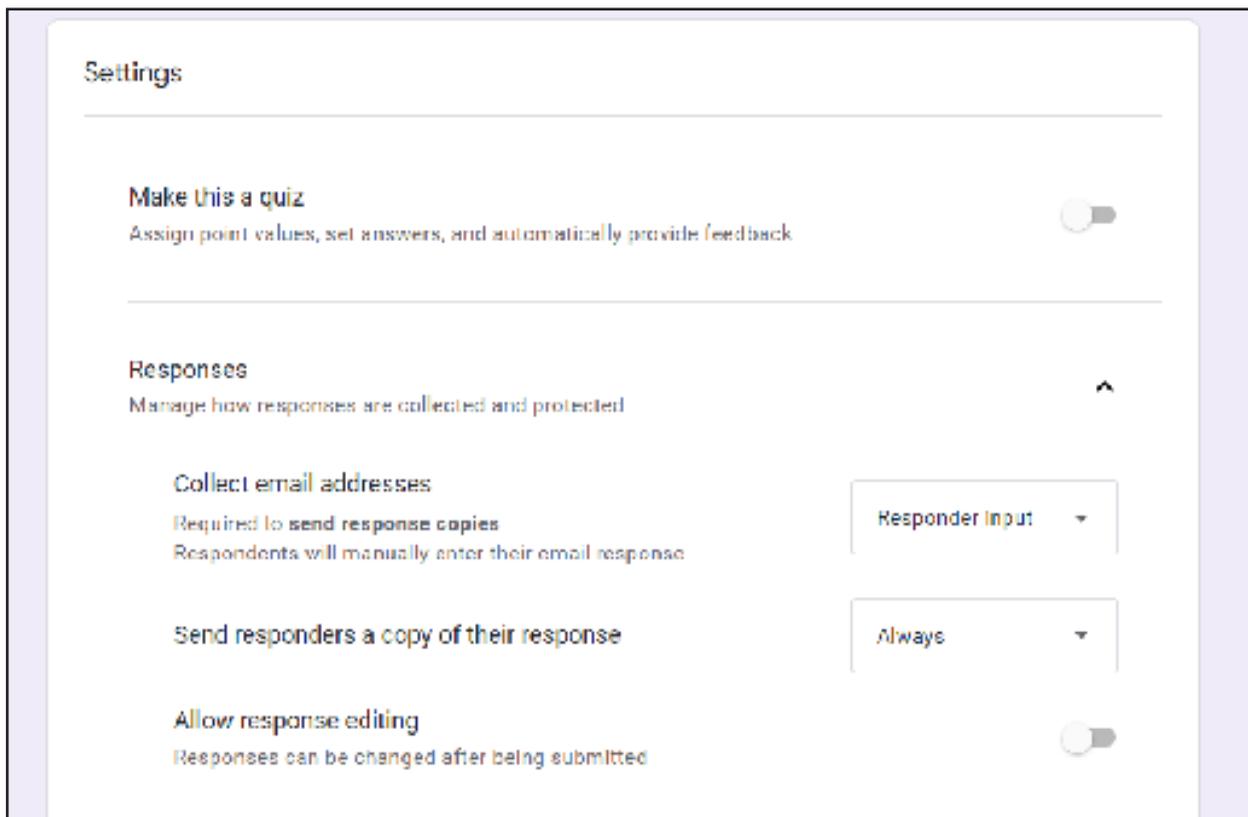


Figure 33: Google form settings.

Now that you have directed Google to collect email addresses, go back to the “Questions” tab and click on the words “Untitled Form” at the top of the form and rename the form by typing in the name of your survey (for example, “Infrastructure KSA+Ts”). Be sure you also change the overall document name to match – the document title is in the upper left corner next to the purple “Form” icon.

Now you are ready to start adding the second essential piece to your Google Form. There is a vertical toolbar with 6 icons on it. To add a question, you will click on the top icon in that list (+). This will add a question below your survey title. In the question box that pops up, you will see a drop-down menu open up on the top right of the question box. To collect the respondents name you will want to click the down arrow and select "short answer" as the question type. Now on the right side of the question box in the line that says question type "Name".

In this form, the only required information is an email address (which you set up in the previous step using the "Setting" menu). You do not want to require answers as the BILT member may not want to provide a response for every item in the Google Form. Keep the "Required" toggle turned off.

Next, you will insert a section title. This is the third icon (double Ts) on the vertical toolbar next to your question (the blue arrow below shows which icon to click) in between your tasks, knowledge, skills and abilities sections. This will break up the form and help the respondent stay focused.

Along with the title you will also create a description to help define each of the four KSA sections.

- Tasks - Specific things an entry level person would be expected to perform on the job with little supervision.
- Knowledge - Focuses on the understanding of concepts. It is theoretical and not practical. An individual may have an understanding of a topic or tool or some textbook knowledge of it but have no experience applying it.
- Skills - The capabilities or proficiencies developed through training or hands-on experience. Skills are the practical application of theoretical knowledge. Someone can take a course on investing in financial futures, and therefore has knowledge of it. But getting experience in trading these instruments adds skills.
- Abilities - Often confused with skills, yet there is a subtle but important difference. Abilities are the innate traits or talents that a person brings to a task or situation. Many people can learn to negotiate competently by acquiring knowledge about it and practicing the skills it requires. A few are brilliant negotiators because they have the innate ability to persuade.

This is what your form should look like to this point. You have the survey title, the required email field, then an optional question for the respondent's name, and the first section heading with title and description.

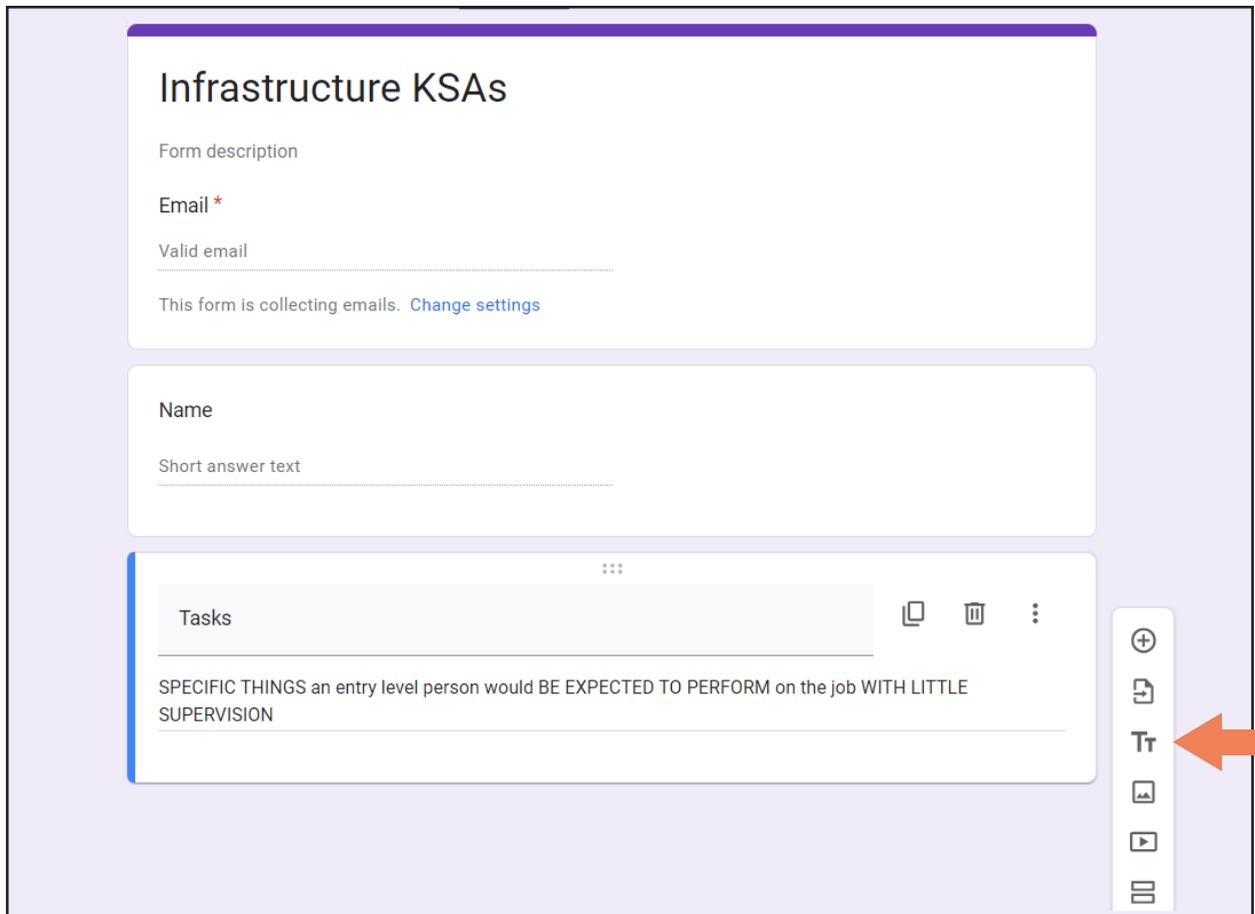


Figure 34: How your Google Form looks before adding questions.

Now we can move to the questions.

Each question for your KSA items will look like the question in the image below. Click the  icon again to add a question. Choose “Linear scale” for your question type. As mentioned, your scale will use the standard KSA voting format: 1 – 4 (1 – Least Important, 4 – Most Important). You may need to adjust the scale with the pull-down menus so the question offers only four choices. It is also important that you annotate your items with letter and numbers, T-task (example T-1); K-knowledge (example K-1); S-Skill (example S-1); A-ability (example A-1). If you do not have this piece the voting formula will not work. Keep the “Required” toggle turned off.

There is not a way to import the contents from your KSA list, unless you are pulling from a previously created survey. You will have to input each item on the list individually; you can either type them in or you can copy and paste it in from your collected list.

To add the next question simply click the plus-sign icon shown below by the red arrow to continue to build out your Google Form:

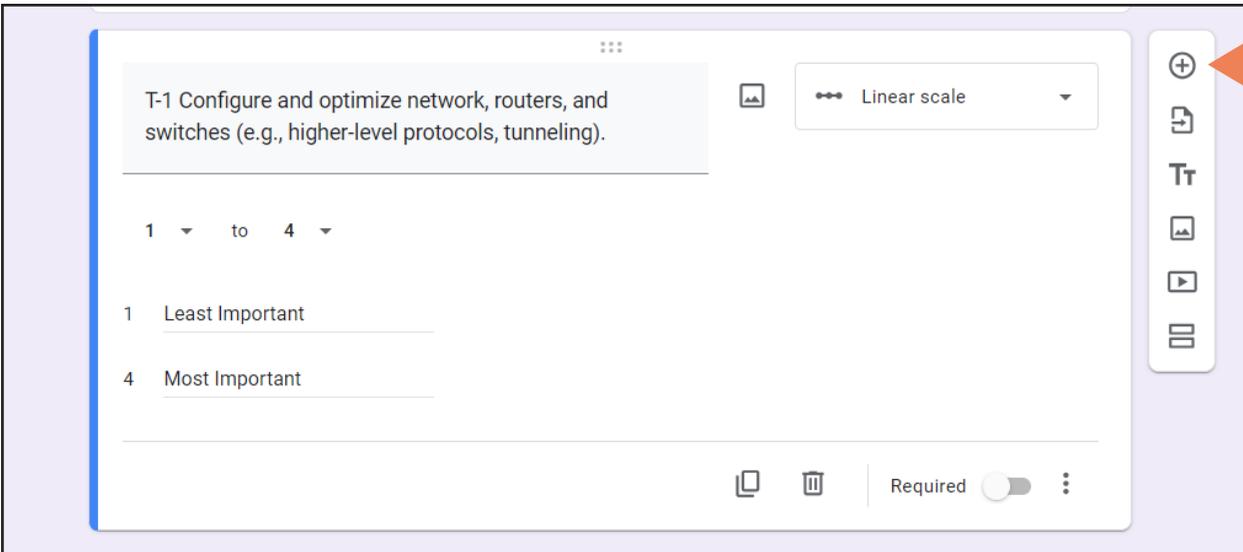


Figure 35: Creating the question answers via linear scale.

Note also that you can click on the  icon to duplicate at the bottom of the question window to duplicate the question, which can make this process go faster. All you'd have to do for the duplicate question is change the KSA description.

You can rename your form for easy finding in your Google Drive by clicking on "Untitled form" in top left corner of the tab. If you previously titled your survey, when you click on the "Untitled form" it will automatically update to the title you typed at the top of the form.

There are also ways to customize the form's style, including changing the colors and adding a logo. To make those adjustments, click on the painter's palette at the top right.

## II. Linking the Google Form to the Google Sheet

Now it's time to connect the voting results of the Google Form to the Google Sheet.

Inside the Google Form page, click on the "Responses" tab in the Form menu header (it's to the right of the "Questions" tab you're working in now), then click on the three vertical dots. From there, click "Select response destination."

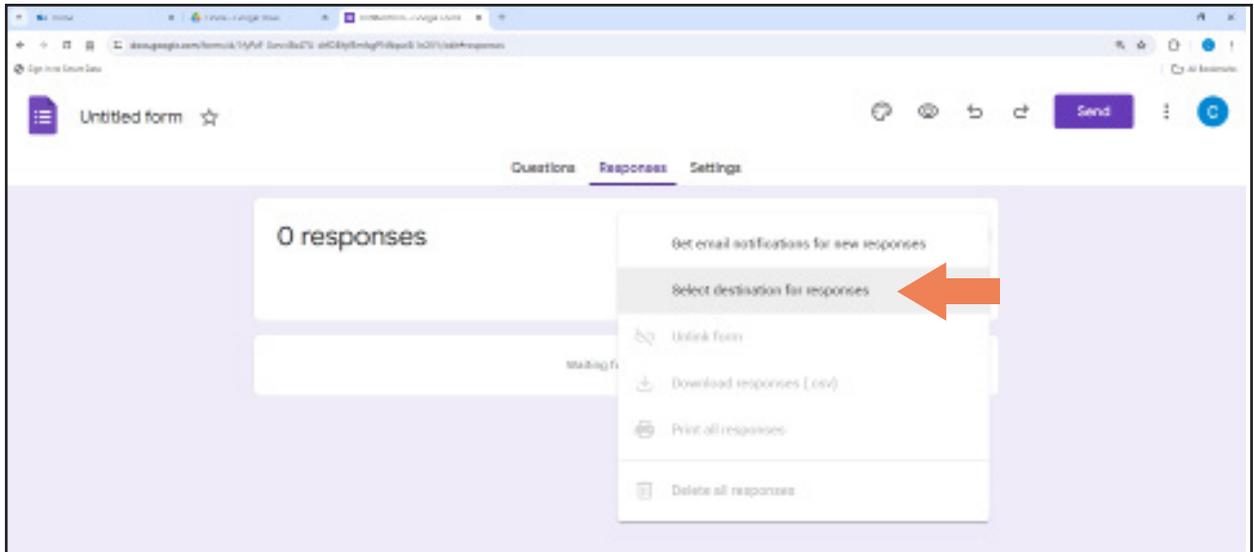


Figure 36: "Select response destination."

In the new "Select response destination" window click on "Create a new spreadsheet," then click "Create."

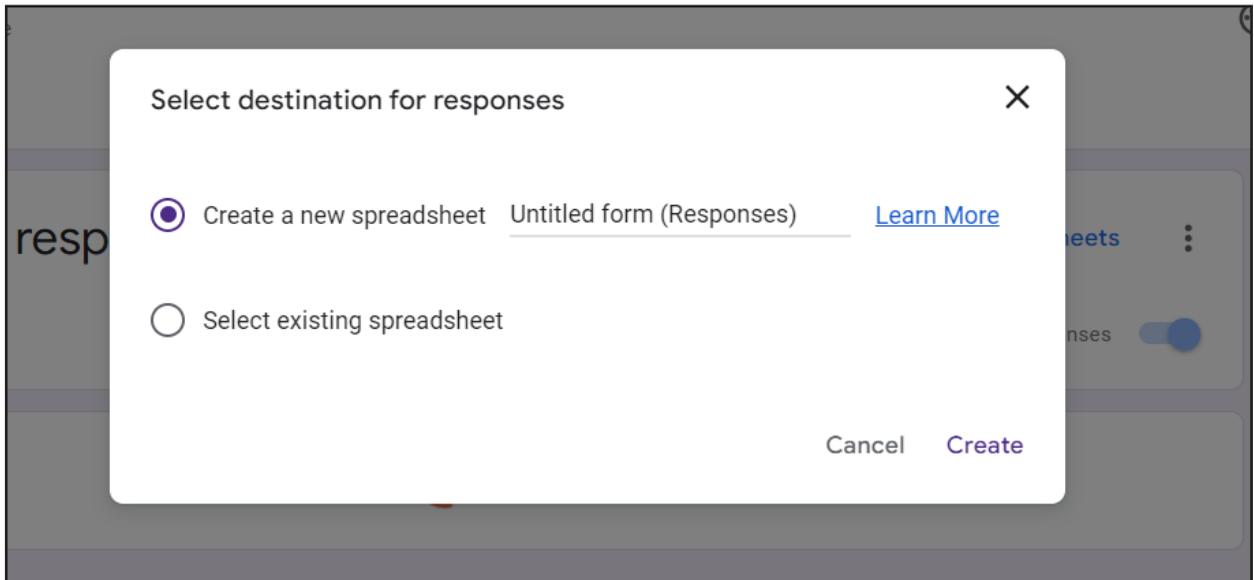


Figure 37: "Create a new spreadsheet."

Messages will pop up in the bottom left corner letting you know that the form and the spreadsheet are linking.

Next, go back to "My Drive," under files you will find a "Google Sheet" titled the same thing as your survey – with the word "(Responses)" added. Double click on it to open it.

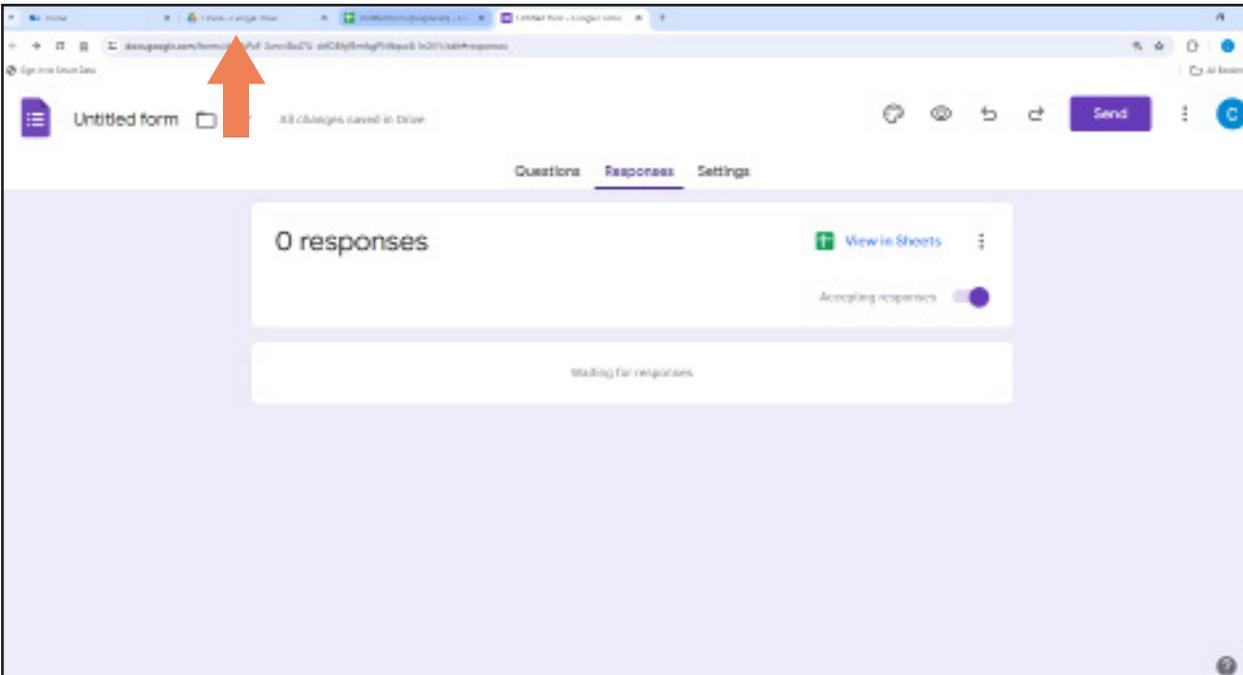


Figure 38: Opening the new Google sheet.

Now you will notice there is a tab on your Google Sheet titled "Form Responses 1."

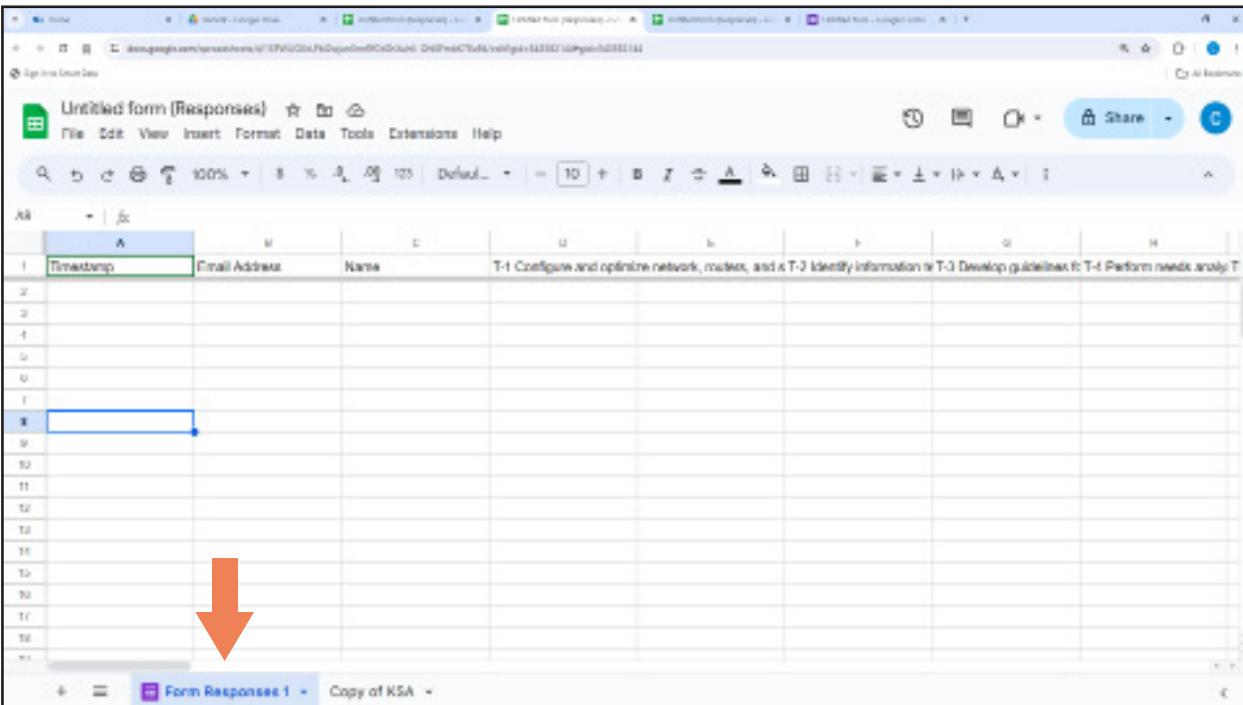


Figure 39: "Form Responses" tab.

Click on the "Form Responses 1" tab and you should see you questions from your Google Form across row 1.

### III. Configuring the Vote Tabulation

To set up KSA sheet with the vote tally go to the Google Sheet “KSA Summary Template” at the link below. There are two tabs in that Google Sheet. “KSA” is the template you will copy. The other “Instructions for use” tab provides additional directions for how to use the template.

[https://docs.google.com/spreadsheets/d/1v7CoXaG7HmfnWcl\\_6H5RjRhHKGoMu6mhcPnlewXgzYE/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1v7CoXaG7HmfnWcl_6H5RjRhHKGoMu6mhcPnlewXgzYE/edit?usp=sharing)

Here are the six steps to follow:

1. Using the link above, open this “KSA Summary Template” Google Sheet. This will open as a new tab in your browser. Make sure that you click on the tab labeled “KSA.” Right-click the “KSA” sheet tab, select “Copy to” and “Existing spreadsheet,” then select the Google Sheet file created in Section 1 and click select. Then click on the Google Sheet browser tab and note the added “Copy of KSA” tab next to your “Form Responses 1” tab.

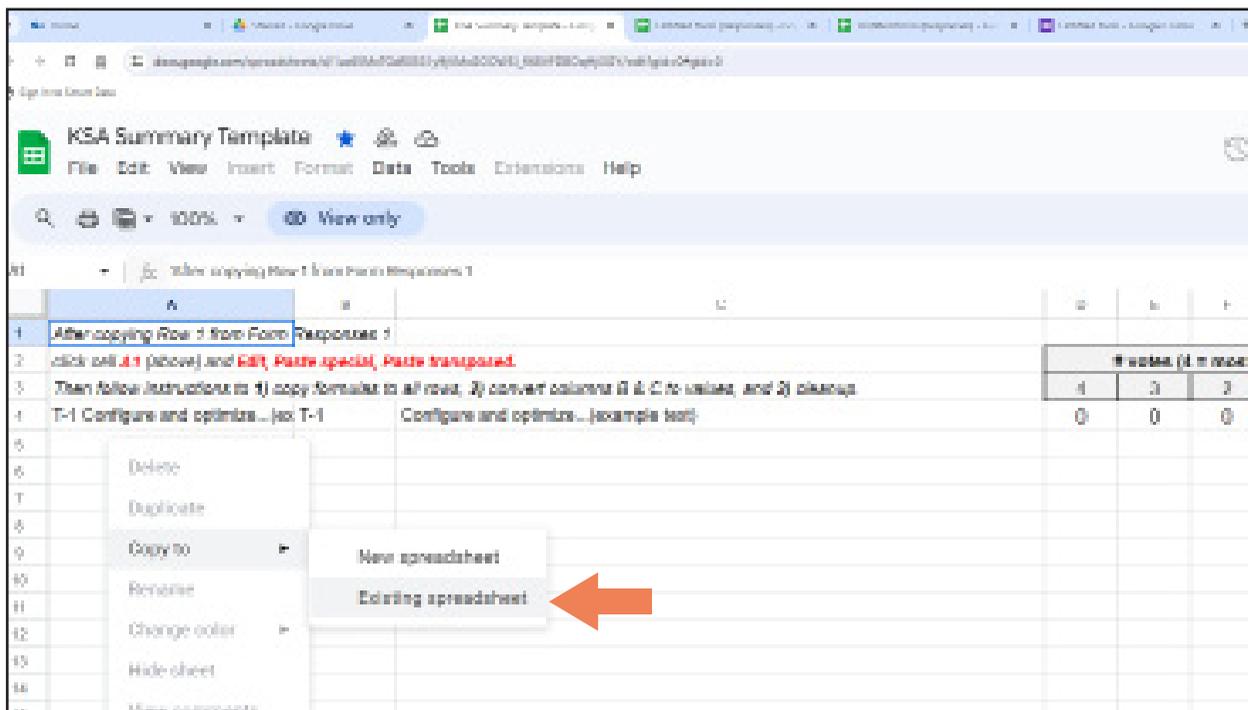


Figure 40: Using existing spreadsheet.

2. In the “Form Responses 1” tab of your Google Sheet (which in our example we’re calling “Infrastructure KSA+Ts”), select all of row 1 by clicking on the number 1. The entire row should be highlighted. Right click on the highlighted row 1 and select Copy.

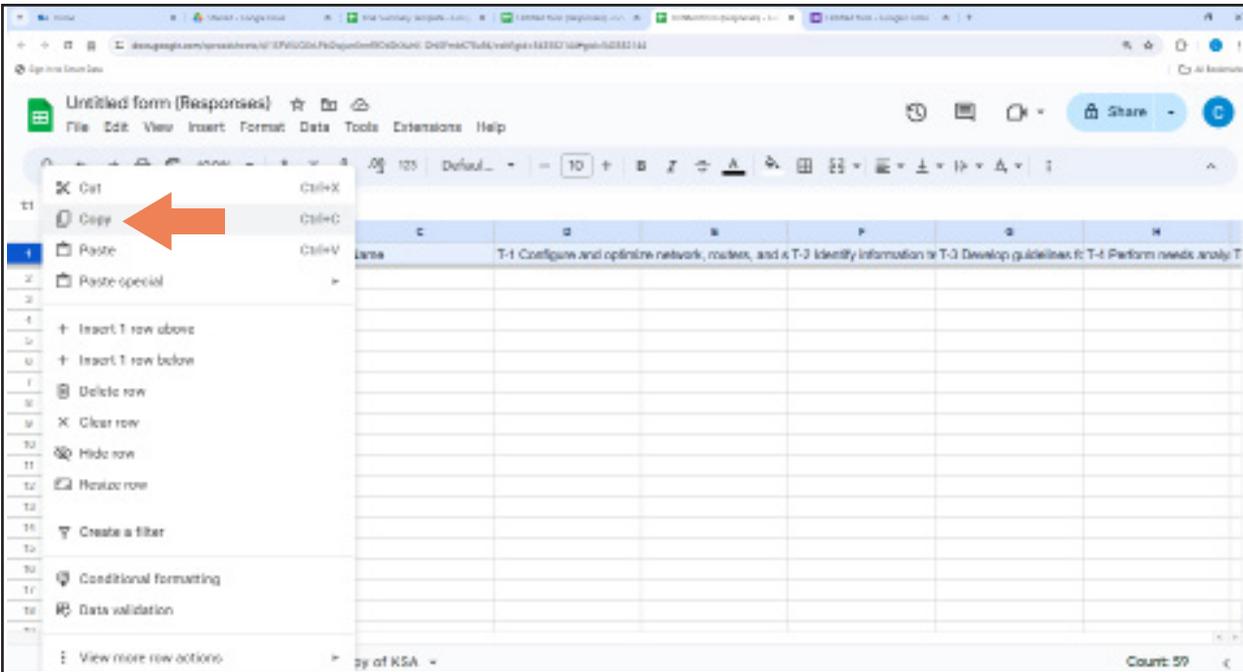


Figure 41: Copying the row.

3. In the "Copy of KSA" tab, select cell A1, right click to open up a menu. Select "Paste special" and then select "Paste transposed."

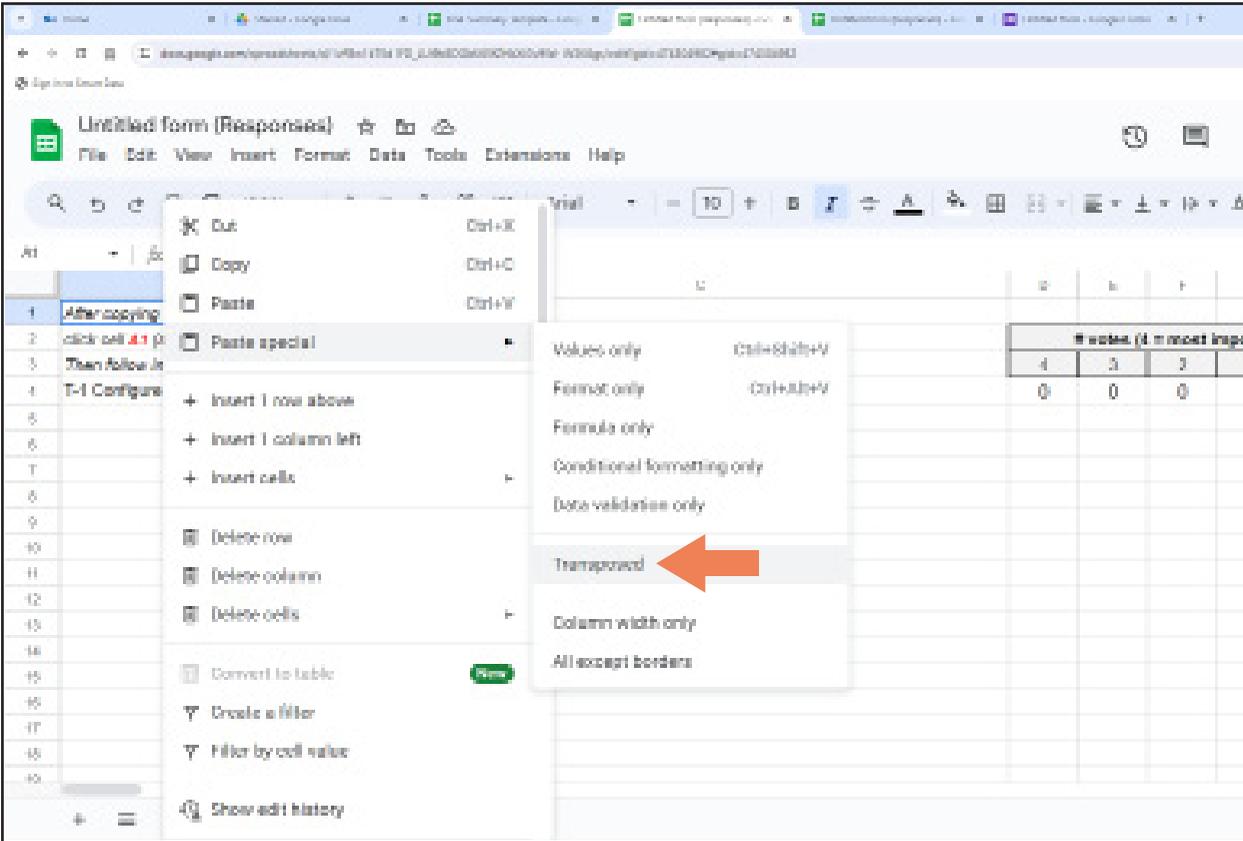


Figure 42: Pasting the row via "Paste transposed."

- Select cells B4 thru I4, double click the tiny blue square in the lower right corner of the selected cells (this tiny square will automatically replicate the formula all the way down to the last row).

	A	B	C	D	E	F	G	H	I
1	Timestamp								
2	Email Address			# votes (4 = most important)					2.6
3	Name			4	3	2	1	Avg	checksum
4	T-1 Configure and optimize network	T-1	Configure and optimize network, routers, and switches (e.g., higher-level protocols, tunneling).	0	0	0	0	#DIV/0!	0

Figure 43: Clicking the tiny blue square.

- Select columns B & C, right click on the selected columns and select "Copy." Then you will right click again in the highlighted selected columns, select "Paste special" then select "Paste values only."

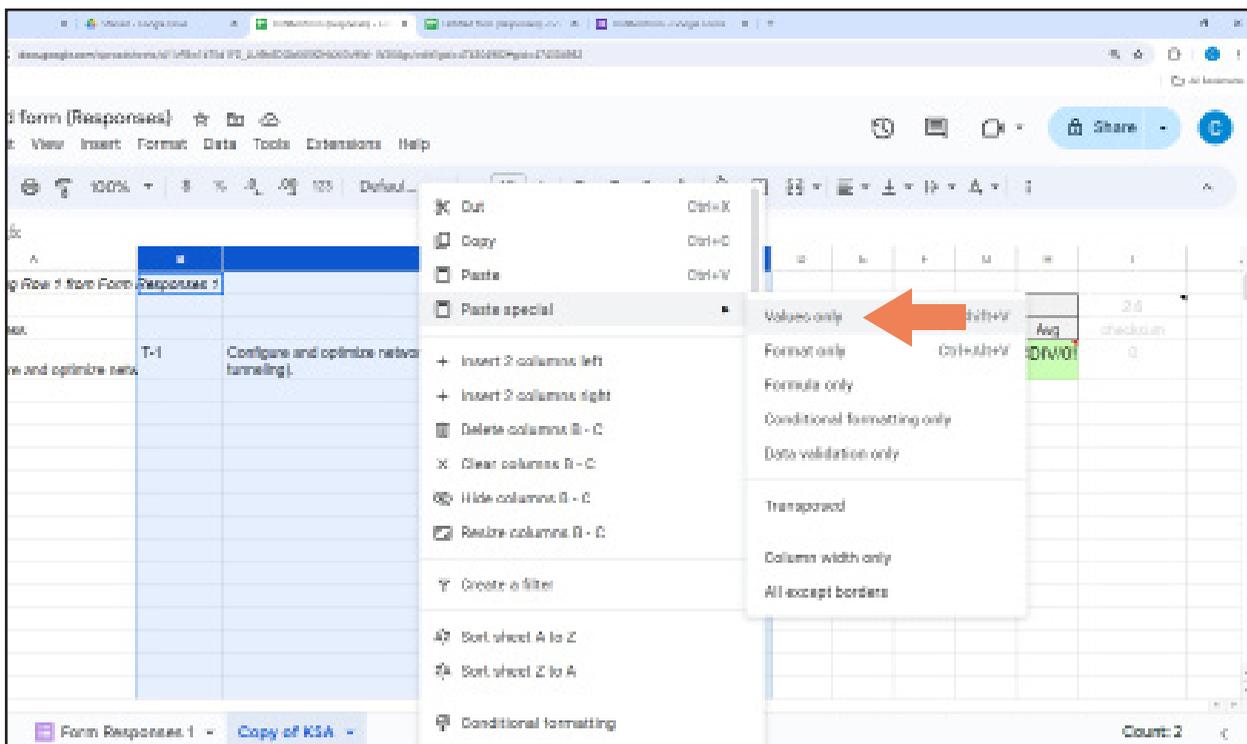


Figure 44: Paste values only.

- Remove column A by selecting all of column A right click on the highlighted column, right click and select delete column.

When you are finished it should look like the screenshot below.

		# votes (4 = most important)					Avg	checkboxes
		4	3	2	1			
4	T-1	0	0	0	0	#DIV/0!	0	
5	T-2	0	0	0	0	#DIV/0!	0	
6	T-3	0	0	0	0	#DIV/0!	0	
7	T-4	0	0	0	0	#DIV/0!	0	
8	T-5	0	0	0	0	#DIV/0!	0	
9	T-6	0	0	0	0	#DIV/0!	0	
10	T-7	0	0	0	0	#DIV/0!	0	
11	T-8	0	0	0	0	#DIV/0!	0	
12	T-9	0	0	0	0	#DIV/0!	0	

Figure 45: How your final Google sheet should look.

#### IV. Testing the Form

Now you are ready to have someone test the Google form. Thorough testing is strongly encouraged before you use the Google voting system with your BILT.

Go up to the tabs in your web browser and click on Google Form:

		# votes (4 = most important)					Avg	checkboxes
		4	3	2	1			
4	T-1	0	0	0	0	#DIV/0!	0	
5	T-2	0	0	0	0	#DIV/0!	0	
6	T-3	0	0	0	0	#DIV/0!	0	
7	T-4	0	0	0	0	#DIV/0!	0	
8	T-5	0	0	0	0	#DIV/0!	0	
9	T-6	0	0	0	0	#DIV/0!	0	
10	T-7	0	0	0	0	#DIV/0!	0	
11	T-8	0	0	0	0	#DIV/0!	0	
12	T-9	0	0	0	0	#DIV/0!	0	
13	T-10	0	0	0	0	#DIV/0!	0	
14	T-11	0	0	0	0	#DIV/0!	0	
15	T-12	0	0	0	0	#DIV/0!	0	

Figure 46: Testing the Google form.

Click on the purple send button at the top right of the screen:

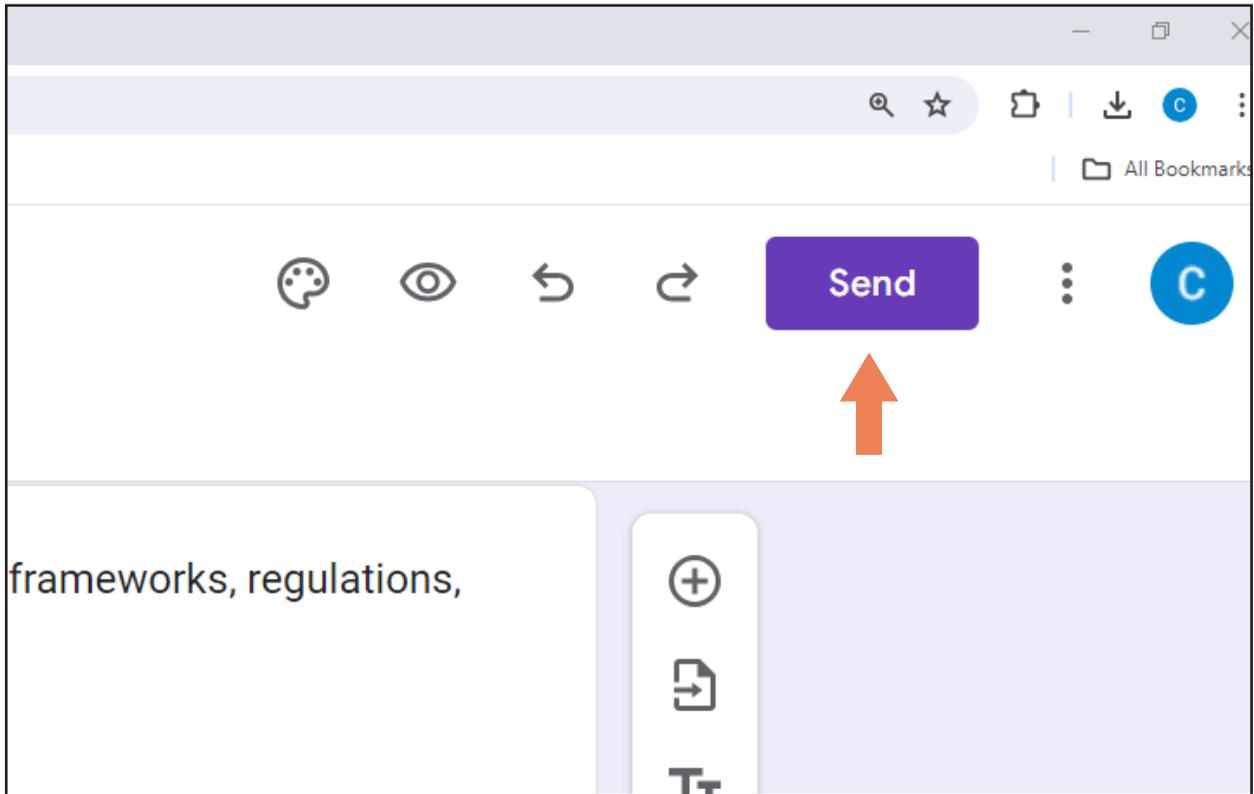


Figure 47: The "Send" button.

Click on the weblink icon (it looks like a chain). That will create a shareable link to this form (notice that under that link is a box you can click to shorten the URL).

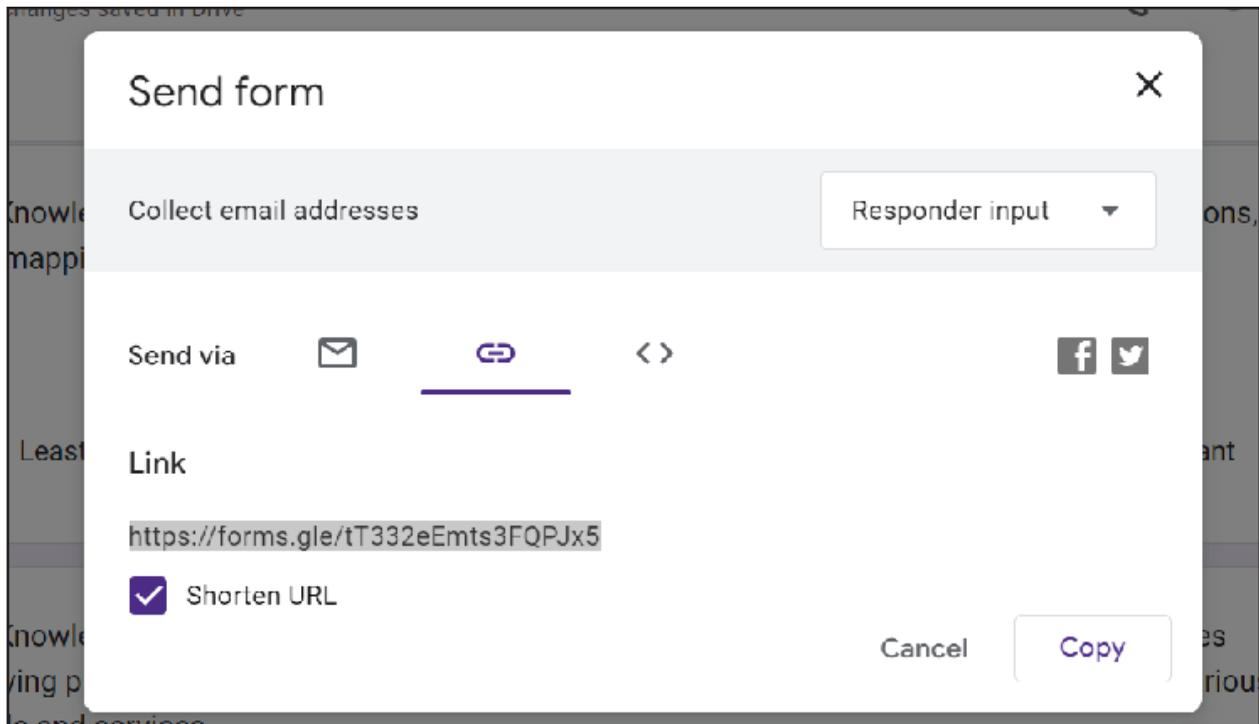


Figure 48: Copying a Google form link.

Send that form link URL to someone else and ask them to use it in a new browser and complete the Google Form:

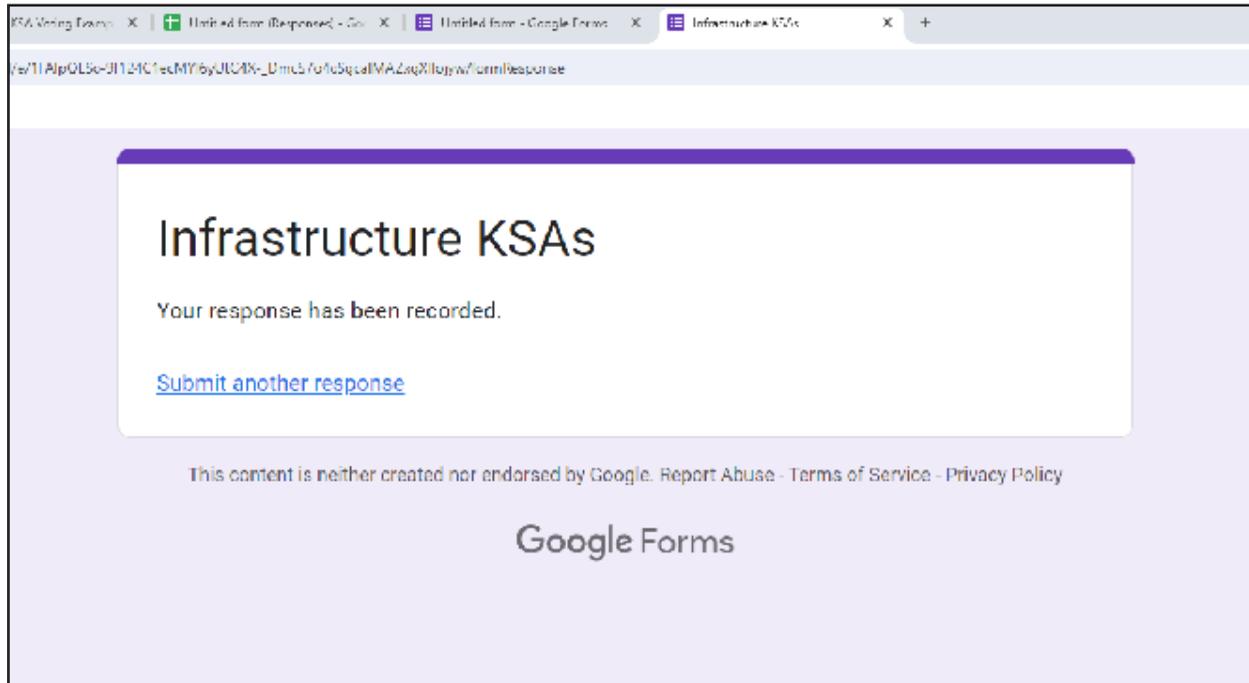


Figure 49: The final “your response has been submitted” form screen.

Now go back to “Infrastructure KSA+Ts” Google Sheet:

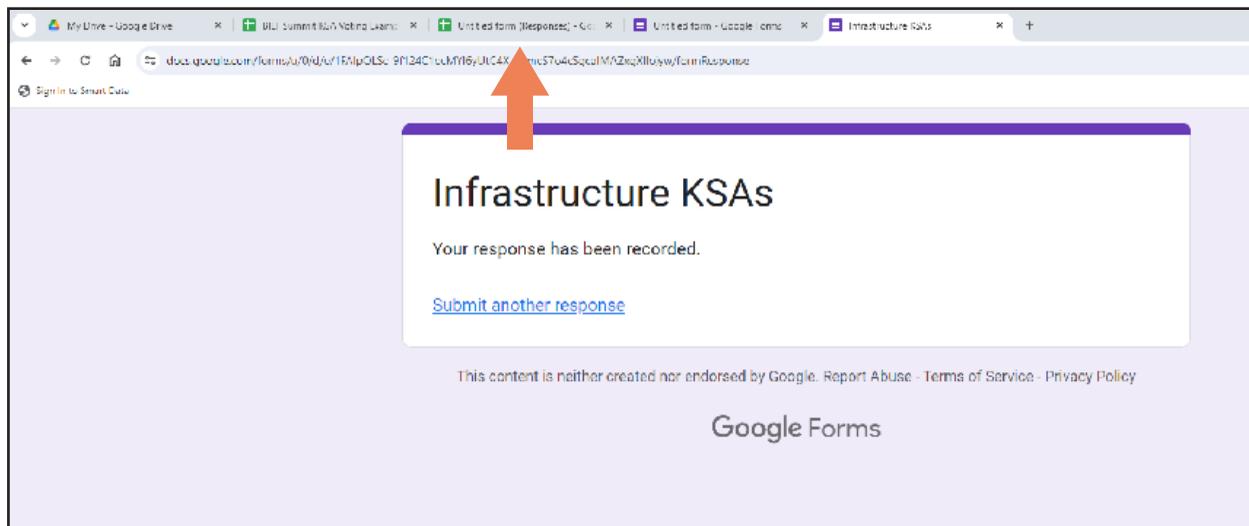


Figure 50: Look for the results in the Google sheet.

If done correctly you should see the test votes show up in your form:

		# votes (4 = most important)					2.6
		4	3	2	1	Avg	(cutoff)
	T-1	0	0	0	1	1.00	
	T-2	0	0	1	0	2.00	
	T-3	0	1	0	0	3.00	
	T-4	1	0	0	0	4.00	
	T-5	0	1	0	0	3.00	
	T-7	0	0	1	0	2.00	
	T-8	0	0	0	1	1.00	
	T-9	0	0	1	0	2.00	
	T-10	0	1	0	0	3.00	
	T-11	1	0	0	0	4.00	
	T-12	0	1	0	0	3.00	

Figure 51: Test votes appear on the Google sheet. Cell H2 contains the sheet's vote 2.6 cutoff average.

If that is reflecting correctly, then congratulations - you have finished! To change the vote cutoff average, enter your new number in cell H2. In the example above, the cutoff is 2.6. Any vote average 2.6 or lower turns the G column averages pink.

BUT... if the numbers don't look right, go back and ensure you followed the six steps in Section 3 for using the template.

## VI. Additional elements

### Re-voting

To enable re-voting follow these simple steps.

1. Go to the Google Form you will be using for voting.
2. Click on the "Settings" tab at the top of the screen scroll down to the "Responses" section.
3. Turn on the "Allow response editing" toggle. This will allow your voters to change their vote. The automatic email they receive with their votes will include a link which they can use to re-open the form and cast a new vote. They need only recast the vote(s) they want to change. Any "blank" choices will remain unchanged – that is, their first votes will remain as is. Respondents can re-vote as many times as they'd like.

Your changes to “Settings” will be saved automatically.

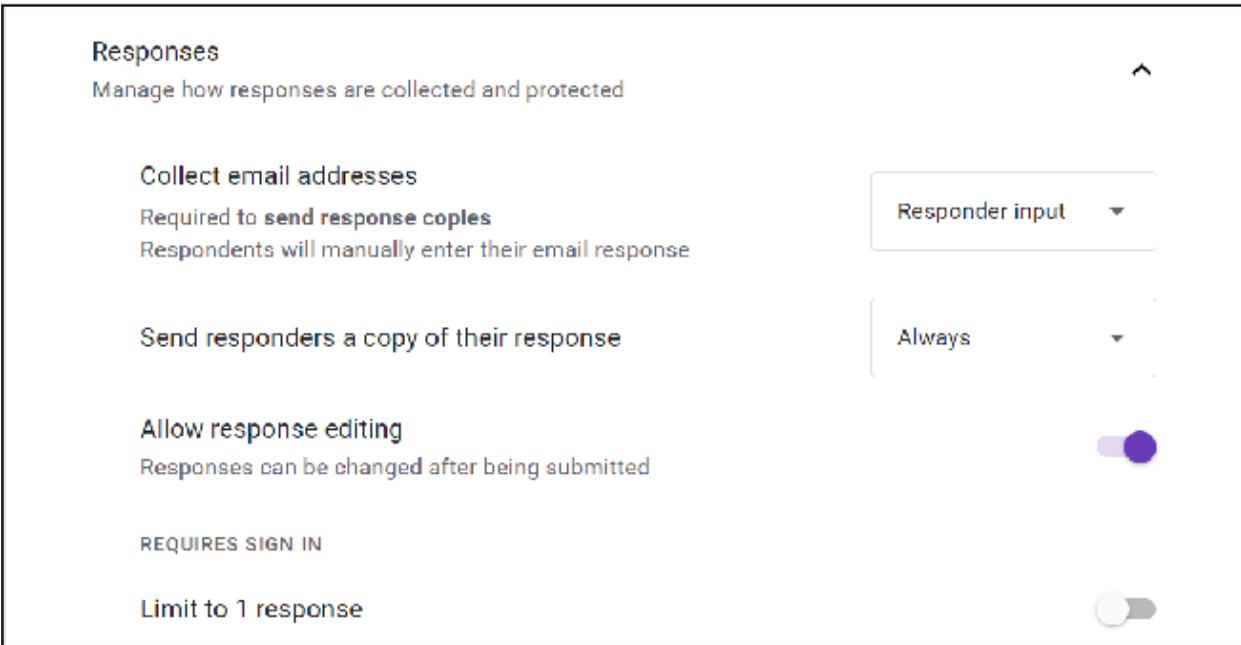


Figure 52: Allowing voters to receive an email “receipt.”

Please note: Google Sheets does not keep a record the employer’s original votes – new votes overwrite the original vote. In other words, while the Google Sheet will include a notation to let you know that a vote has been changed, you will not be able to see the original vote.

If you want to compare original votes to the changed votes, you’ll need to save a copy of the results before re-votes.

\*\* NOTE: If you do not make this “Edit after submit” settings change, do not use the Google form for a re-vote. Instead, conduct the re-vote in the room with hand-counting and make a manual adjustment of the KSA spreadsheet. Until that “Edit after submit” choice is selected, the Google Sheet will record every vote – that is, if a BILT member votes twice, both votes will be recorded and affect your average.

#### Amending an Existing Google Sheet and Google Form

The best way to amend a Google Sheet and Google Form is to copy the existing Google Form. If you copy the Google Sheet linked to the Google Form, it will copy both and link them but it is hard to make modifications. For this reason, it’s better to copy the Google Form.

1. Right click on the Google Form you want to copy, then select “Make a copy” from the menu.

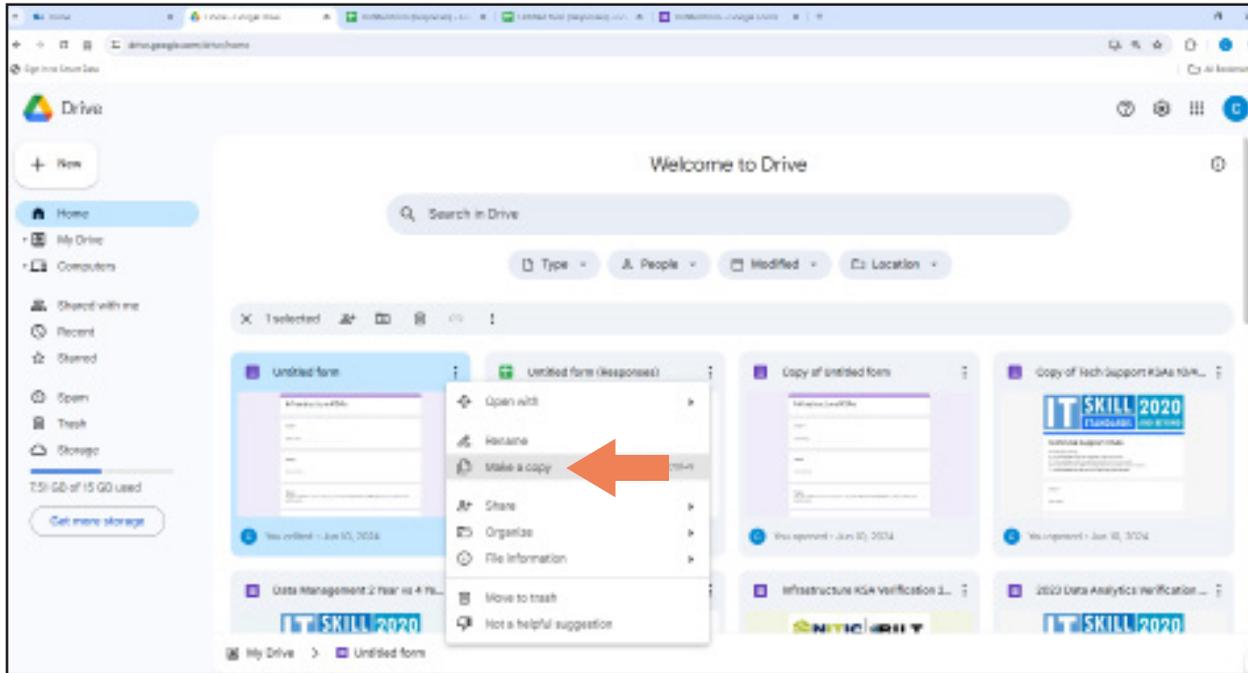


Figure 53: Making a Google form copy.

2. Open the new “Copy of the Google Form” via the new tab at the top of your browser. Rename the Google Form in the upper left field to avoid accidentally changing your original (see screenshot below).

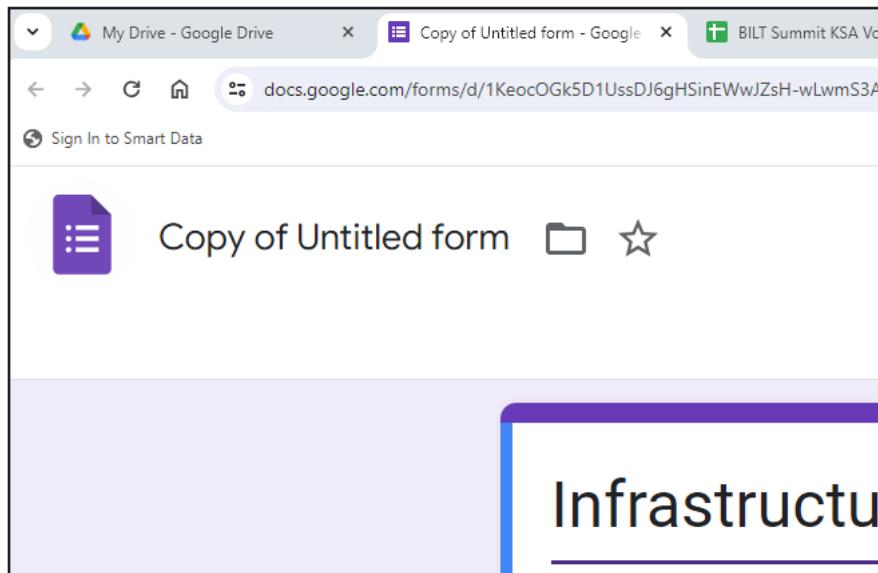


Figure 54: Updating the Google form title.

3. Modify the “Google Form” based on your needs. Once all modifications are completed link responses to a Google Sheet as described in Step 2 above.
4. Now follow the directions from Sections 3 and 4 above.

The logo consists of three rectangular blocks. The first block is dark blue with the letters 'IT' in white. The second block is dark blue with 'SKILL' in white on top and 'STANDARDS' in white on the bottom. The third block is a lighter blue with '2020' in white on top and 'AND BEYOND' in white on the bottom.

**IT SKILL 2020**  
**STANDARDS AND BEYOND**



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