

August 6th, 2020

CC: Matt Moocarme
Desi Pilla

Survey Analyzer

AMS: Advanced Advertising Data

Welcome to **Survey Analyzer**! This is an app that will read your survey results for you and group them into distinct topics based on the contents of responses. The analysis will make it easy to visualize broad themes discussed by the respondents, as well as see the most representative phrases or sentences of each topic. This tool can be accessed entirely through Slack without needing any advanced technical skills. Simply share your Excel file with Survey Analyzer and confirm that it knows the correct file to analyze. This guide provides instructions for how to properly format your Excel file and handle any errors that may appear.

Topics included in this guide are:

Formatting the Survey Response File.....	2
File Type	2
File Formatting	3
Interacting with Survey Analyzer	5
How to Find Survey Analyzer	5
How to Start the Analysis	6
Downloading and Understanding Results	7
Download Files From Slack	7
Understanding the Excel File.....	8
Understanding the HTML Files	10
Dealing With Errors	12

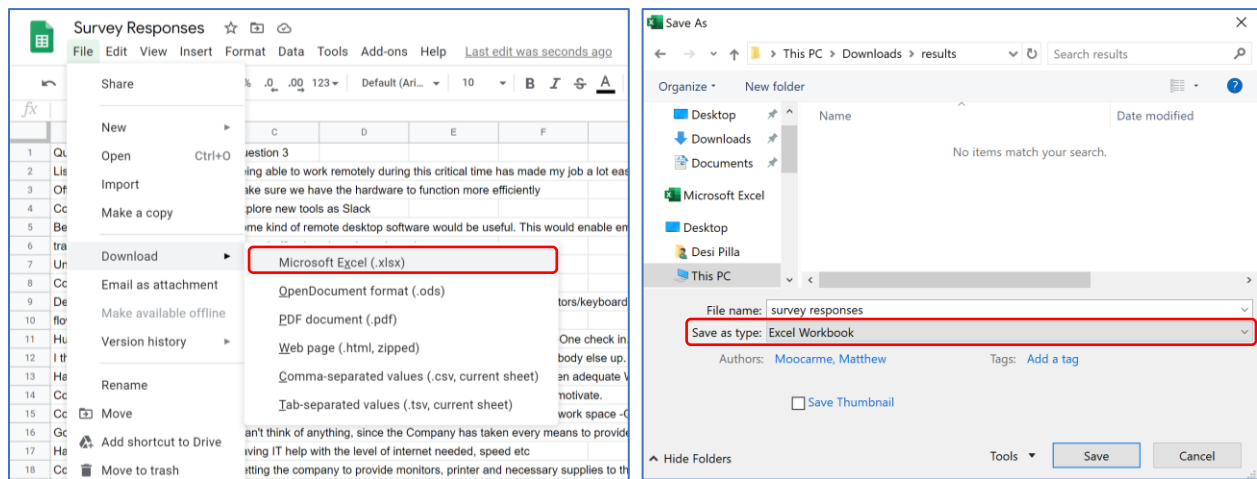
Formatting the Survey Response File

File Type

Survey Analyzer only accepts Excel files. If your results are in a Google Sheets document or CSV file, it must first be saved as an Excel file with a .xlsx file extension.

To download a Google Sheets document, click *File > Download > Microsoft Excel (.xlsx)*

To convert a CSV file, click *File > Save As*. Under *Save as type*, select *Excel Workbook (*.xlsx)*



How to save a Google Sheets document (left) or CSV file (right) as an Excel Workbook

File Formatting

It is crucial for you to ensure that your results file is formatted properly for Survey Analyzer to run properly. If the uploaded workbook does not adhere to one of two styles, the model will respond with an error and be unable to analyze your results. To ensure the experience is as seamless as possible, please check that your results are formatted accordingly before sharing the file with Survey Analyzer.

Style 1: All questions on the same sheet

The first style accepts an Excel workbook that meets the following criteria:

- The workbook contains only **one worksheet**
- The survey questions in row 1, followed by the responses in the rows beneath it
- Each question is separated by column
 - Question 1 and its responses are located in Column A
 - Question 2 and its responses are located in Column B, etc.
 - There are no empty columns between questions
- Question headers can include text such as
 - Question 1*
 - Whatever question 1 was asking?*
- The questions will be referenced sequentially by the order they appear in the columns
 - In the example below, the questions would be labeled *Q1*, *Q2*, and *Q3*
 - Result files for each question will be denoted with *__Q1__*, ... in the file names
- The worksheet does not have any merged cells
- Empty cells are allowed for the responses. There is no need to condense the cells

Question Header	B	C
What else can we do as a team to take action against racism?	What other topics, related or unrelated to today's, would you like to cover in future	
These are very difficult and uncomfortable conversations to have, although imperative. I always like to hear what each of the Marcomms groups are working on, as well as what	Good first steps would be more, and smaller, conversations - it felt like we were just ge'd love more conversation around how we see ourselves supporting the broader goals of	
I appreciated Julia's openness at the beginning of the Town Hall, and I	Promote more people of color. Make promotions seem a bit more fair. Think about se	Unstable environment of the company related to merger and corona virus
Help give us more of action items of how we can help and how we can be advocates and better partners. I loved helping us get out of our own mindsets and try to open our eye	Discuss action items that we can either as a group individual participate in.	I think I personally would be more open in smaller groups.
I personally did not, however I believe it was very helpful for many.	Creating a safe space within our teams to speak up and have the support of the company.	
Great speakers!	The feedback I received from colleagues was that they didn't feel like it was a safe space white fragility, how to be an ally	
	I would like sources to be able to read about and understand racism and it's history.	
	I think it would be helpful to have non-POC think about their own instincts and biases	Addressing of the current situation as it relates to work level or lack of and the continue
I'm glad that leadership addressed the issues. Although, I will say that	Promote more people of color within our groups.	
	Have similar open meetings. Be candid about diversity progress or lack thereof in the d	Cultural awareness; hiring and promoting; internships
Thought the doctors were great. Think it would have been better in sn	More SENIOR leaders of color in MarComms org and across the company. Understand s	More on anti-racism and actions that can be taken.
	I think we need to have smaller groups of people to start the education -HOW to talk about race, review appropriate vs. inappropriate language, what to be aware of in the wor	
I would have like to see more of my white colleagues speak up and sha	Maybe have a session where my white colleagues take a racial bias training.	Speak on the future of our company during these difficult times.
Incredibly important to come together as a group for this conversation	Continuing these and other conversations so it's not just a moment but sustained progr	I definitely find that conversations like the one yesterday, where we learn about and cor
	Learn more about what we can do, (what can do personally as a white woman?).	I love to learn about what everyone does. I work in my little bubble so it is interesting to
Very powerful, emotional and thought provoking. Also, dedicating wor	Not sure, but having an open dialog helps everyone understand what your colleagues a	Very unrelated...and maybe when we get more details, but would enjoy hearing about o
I loved having... They were	I think as a company we need to re-evaluate how BIPOC are hired, promoted, and are e	I think what's more important is to keep the momentum going by making sure that if an
This was so informative and helpful. Wish it had lasted longer! Feel like	Listen	
	More opportunities like this are important. Would also be great if there was a way that people could actually share moments or experiences where they have felt or seen racism	
	Continue these conversations and take action in the work place.	More experts coming in to facilitate tough conversations.
I thought today's Town Hall was a good first step. It really hit me when	Especially in the workplace, I'd like to see action against words. If D&I is a priority, as it	One session on BLM isn't enough. THAT DOES NOT FIX SYSTEMIC RACISM IN THE WORKP
	Continue to have a hard look at BIPOC in positions of corporate leadership.	What are the obligations of corporations to economic justice?
I definitely felt supported and felt this was an access point for further	Encourage individual conversations in smaller groups with discussion points.	Create mentoring programs for BIPOC people and leadership.
	more open dialogue like this	
	Book club or weekly email with resources we can take advantage of	
	We need a more diverse team.	
	Arming us with knowledge and resources to better educate ourselves, as well as prepare us for uncomfortable talks with family or people, who for some reason, are against the	
I felt like thoughts I couldn't express or understand were thoughtfully	I'm looking forward to the list of resources/books. There were a couple mentioned th	More sessions or optional sessions with speakers/social workers/educators (I really liked
	start as individuals - where we are at. read an anti-racism related book and share a refl	would love to hear reflections of conversations our senior leaders have had about race/a
	more conversations like this and more resources, book clubs, film screenings.	
	Continue	
	Treat yo	
		expi Gender bias Age bias
		nce Continue the race conversation. Updates on return to work status and projects our team
		Yes I Related to today's topic of racism. Ed like to see a more diverse panel of speakers. In my

Only one sheet

Style 2: Each question on a different sheet

The second style accepts an Excel workbook that contains **at least one worksheet**, where each worksheet meets the following criteria:

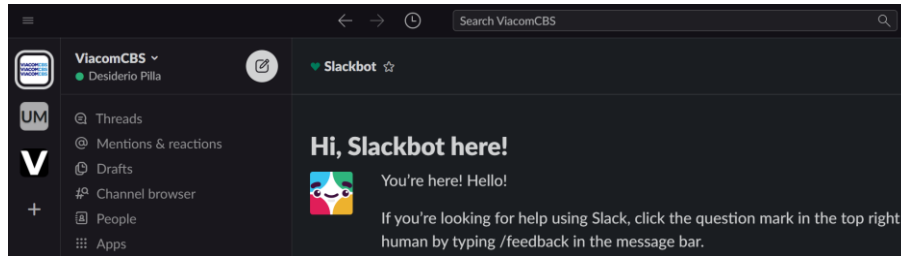
- The survey question is in Cell A1
- The survey responses are in Column A below the question header
- Question headers can include text such as
 - Question 1*
 - Whatever question 1 was asking?*
- The sheet name will be how the question is referenced
 - In the example below, *Q6* is the sheet name
 - Result files for this question will be denoted with *__Q6__* in the file name
- The worksheet does not have any merged cells
- Empty cells are allowed for the responses. There is no need to condense the cells

	A	B	H	I	J	K	L	M
1	Q6							
2	Listen all parts involved in changes before take any decision.							
3	Offer training that will help people gain the skills that they will require as p							
4	Communication as soon as possible.Communication as soon as possible.							
5	Be more specific regarding the future changes.							
6	transparencytransparencytransparencytransparencytransparency							
7	Understand what it takes to do what we do before accelerating all our deliv							
8	Communication in the process ahead.							
9	Develop a cross-training strategy for employees. We should all be given tr							
10	flowchartsflowchartsflowchartsflowchartsflowchartsflowchartsflowcharts							
11	Humbling one's self.Humbling one's self.Humbling one's self.							
12	I think if we have bi-weekly Zoom or Slack conferences with our teams jus							
13	Have an open mind and look for ways to improve the deliverable needs.							
14	Communicate with the team the expectations.							
15	CommunicateCommunicateCommunicateCommunicateCommunicate							
16	Good communication.Good communication.Good communication.							
17	Having clear objectives on what is needed by Finance to increase the Con							
18	Constant communication!Constant communication!							
19	Overcommunicate and centralized messaging.							
20	Continue constant communication within the organization.							
21	Listen to the groundListen to the groundListen to the ground							
22	Communicate up to date information regarding integration.							
23	Have the people leading this change meet in person with the various acco							
24	CommunicationCommunicationCommunicationCommunication							
25	communicationcommunicationcommunicationcommunication							
26	Continued transparency and communication.							
27	Clarify the reporting structure and information flow outside the departmen							
28	Clear communication plus patienceClear communication plus patience							
29	The reoccurring town halls so employees continue learning up to date info							
30	Communication is importantCommunication is important							
31	Just information and communication.							
32	More frequent (Monthly?) Finance Townhall meetings as we further integri							
33	clear communication from management							
34	CommunicationCommunicationCommunicationCommunication							

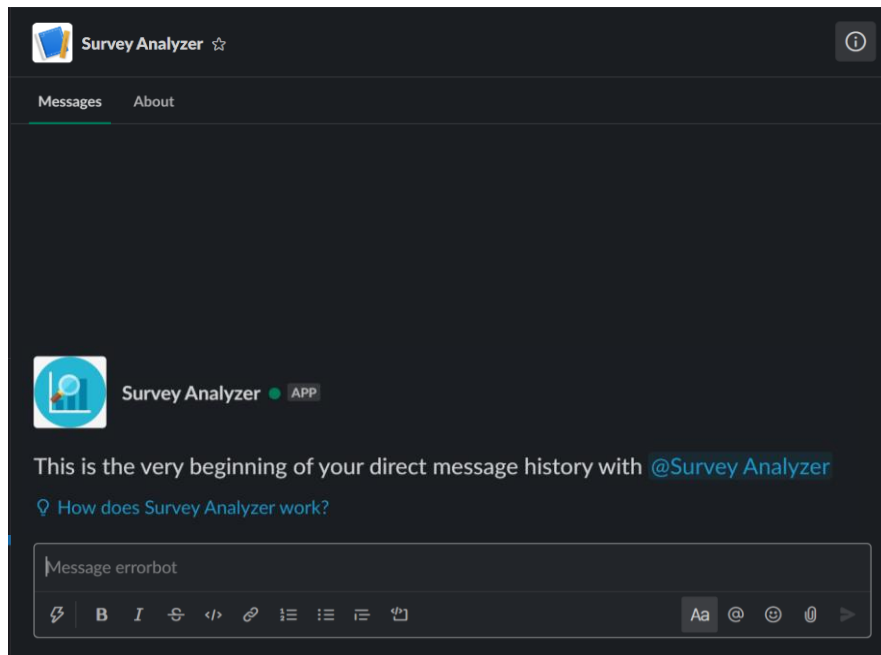
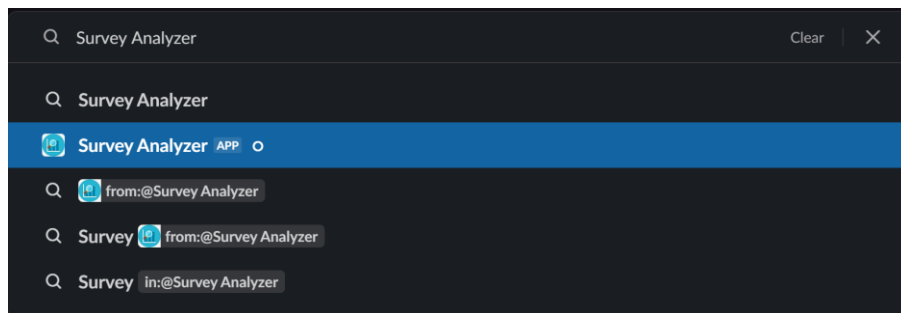
Interacting with Survey Analyzer

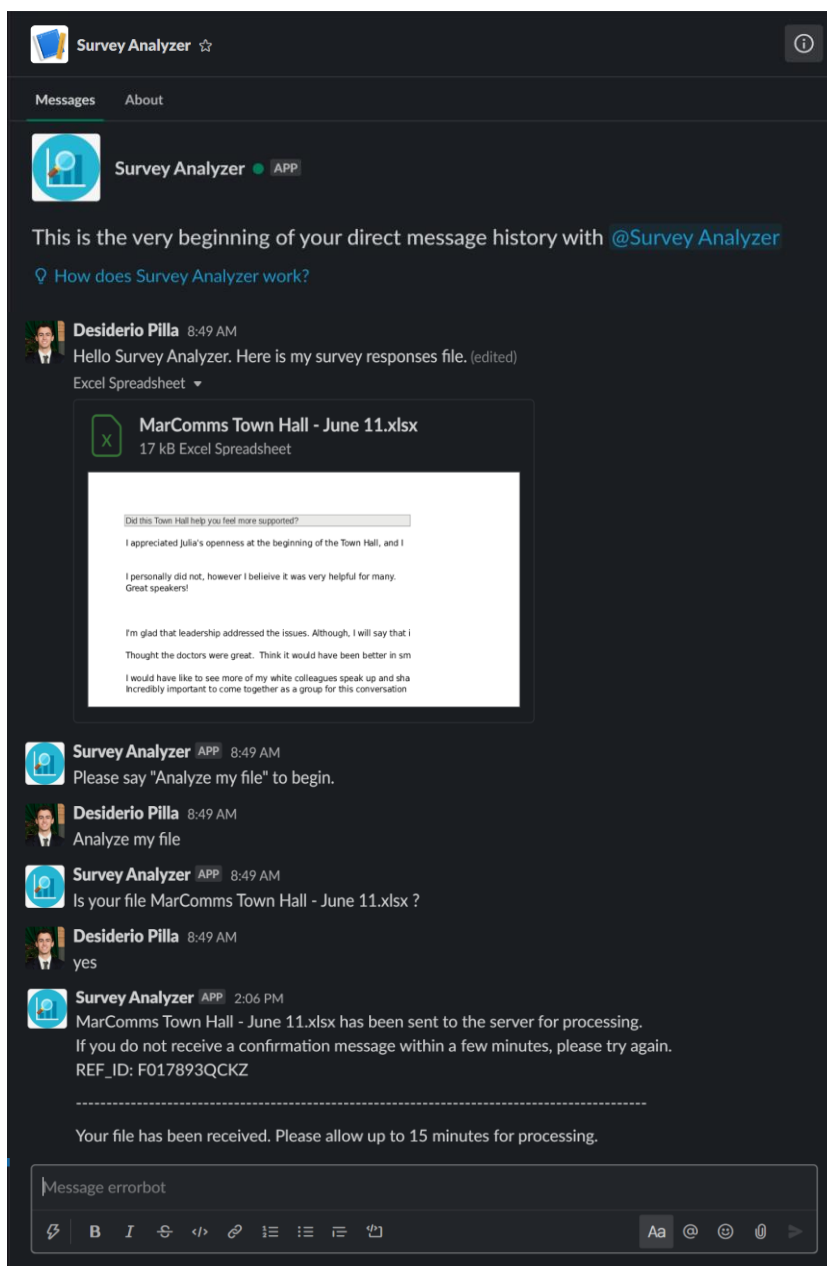
How to Find Survey Analyzer

First, open the **Slack** application and Navigate to the *ViacomCBS* workspace.



In the *Search* bar at the top of the window, type in **Survey Analyzer** and select the App.





Downloading and Understanding Results

The HTML files are the optimal way to view the results of the analysis. The interactive figure is more easily interpreted, yet specific sentences can also be viewed in the table below. The Excel file is merely a database of all survey responses should you wish to read them all individually.

Download Files From Slack

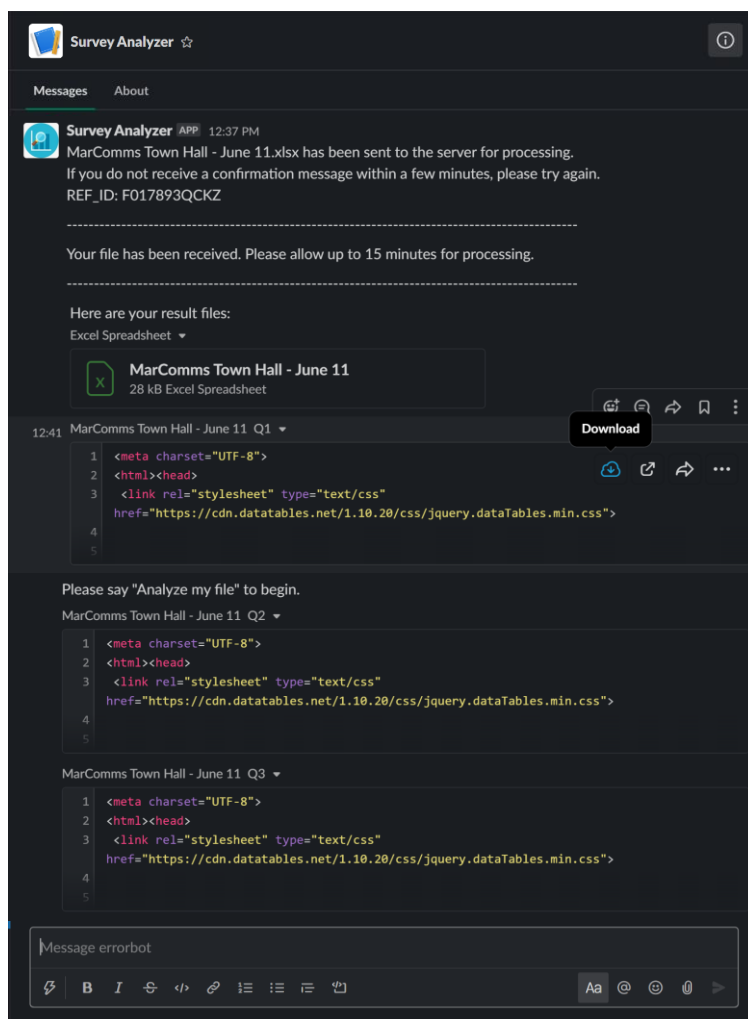
When your files have finished processing, Survey Analyzer will notify you and send you the results. These include multiple files:

- The original Excel workbook with added worksheets containing results for each question
- HTML files displaying visualizations and the top 20 responses for each topic

To download the files, hover over the file in the chat window.

On the right, click the download icon (a cloud with a downward pointing arrow).

This will download the file to your local drive, where it can then be opened.



Understanding the Excel File

Only one Excel workbook will be shared. This workbook is a duplicate of the one that was originally uploaded, but now contains two extra sheets per question. Each question has a *Top Topics* and *Topic Dominance* results sheet.

Sheet	Top Topics - Q1	Topic Dominance - Q1	Top Topics - Q2	Topic Dominance - Q2	Top Topics - Q3	Topic Dominance - Q3
-------	-----------------	----------------------	-----------------	----------------------	-----------------	----------------------

The **Top Topics** sheet displays each sentence of each response for a certain question in its own row. Responses are split by sentence because a single response could exhibit multiple topics. The table of sentences presents the following attributes:

- **Question ID:** this will be the same value for all sentences on the sheet
- **Response ID:** This has three components.
 - Question ID
 - Response #
 - Sentence #
 - The Response ID Q1-3-1 corresponds to the second sentence of the third response to Question 1
- **Text:** this is the actual sentence
- **Dominant Topic:** this is the numerical value of the topic (generated by the model) that best represents the content of the sentence
- **Topic Percent Contribution:** this represents how representative the dominant topic is of the sentence contents. Higher values imply a stronger association between the sentence and the topic
- **Keywords:** these are the top words that “define” the topic attributed to the sentence

question_id	response_id	text	dominant_topic	topic_perc_contrib	keywords
Q1	Q1-0-0	I appreciated Julia's openness at the beginning of the Town Hall, and I thought the moderators set a perfect tone	4	0.2647	set, racism, issue, support, Dr, work, feel, helpful, great, conversation
Q1	Q1-1-0	I personally did not, however I believe it was very helpful for many	2	0.2647	conversation, helpful, feel, racism, Dr, work, set, support, issue, think
Q1	Q1-2-0	Great speakers	1	0.2647	feel, great, support, racism, Dr, work, set, helpful, issue, conversation
Q1	Q1-3-0	I'm glad that leadership addressed the issues	4	0.2647	set, racism, issue, support, Dr, work, feel, helpful, great, conversation
Q1	Q1-3-1	Although, I will say that it felt a little like it was designed for the white people "in the room	1	0.2647	feel, great, support, racism, Dr, work, set, helpful, issue, conversation

There are filters on each column to make it easy to sort through sentences.

The **Topic Dominance** sheet displays each topic generated by the model for a certain. The table presents the following attributes:

- **Dominant Topic:** this is the numerical value of the topic (generated by the model) that best represents the content of the sentence
- **Keywords:** these are the top words that “define” the topic attributed to the sentence
- **Number of Documents:** this is the number of sentences that relate to this topic
 - Each sentence can only be labeled as relating to a single topic
- **Percent of Documents:** this is the same as *Number of Documents*, but converted into the percent of all sentences across all responses for this question

dominant_topic	keywords	num_documents	perc_documents
1	feel, great, support, racism, Dr, work, set, helpful, issue, conversation	21	0.600
2	conversation, helpful, feel, racism, Dr, work, set, support, issue, think	4	0.114
3	support, Dr, work, feel, racism, set, conversation, helpful, great, think	7	0.200
4	set, racism, issue, support, Dr, work, feel, helpful, great, conversation	3	0.086

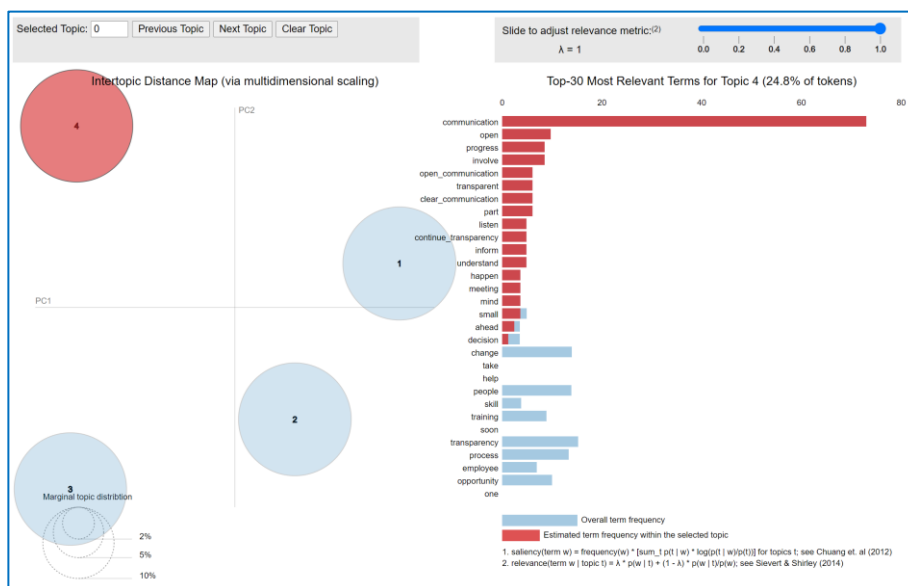
Understanding the HTML Files

Each question has its own HTML file containing the model's results. The main component of the HTML output is the visualization. This is an interactive figure that allows you to see the different topics discussed across all responses to a specific question.

The bubble chart on the left contains three pieces of information

- **Topic Number:** the number in the center of the bubble is the topic number. This is directly comparable to those seen in the Excel workbook
- **Bubble Size:** the size of the bubble corresponds to the percentage of *sentences* that relate to this topic
 - Each sentence can only be labeled as relating to a single topic
 - Responses are split by sentence because a single response could exhibit multiple topics
- **Bubble location**
 - The chart axes have no real meaning
 - The *relative* location of bubbles imply how similar topics are to each other
 - Bubbles that are closer together correspond to topics that are more similar to one another

The bar chart on the right dynamically updates as you hover over different bubbles on the left. When no bubbles are selected, the chart shows the top 30 most salient (i.e., most prominent) terms found throughout all responses. When a bubble is highlighted, however, the terms that correspond to that topic are highlighted in red and displayed, sorted by their importance **to that topic**. The larger the red bar, the more important that term is to the “definition” of the topic. The overall saliency of the terms are shown in blue behind the red bars, though they will only be visible if a term relates to multiple topics.



The second component of the HTML file is the dynamic table beneath the figure. This is the same table in the **Top Topics** sheet of the Excel file for the specific question. However, only the top 20 sentences for each topic is included in the HTML table, and it is also searchable by key words or phrases.

Show 10 entries		Search:		
response_id	text	dominant_topic *	keywords	
18 Q6-117-1	living in limbo is not productive on many levels	1	team, integration, people, update, clear, email, good, plan, regard, employee	
19 Q6-121-0	More timely	1	team, integration, people, update, clear, email, good, plan, regard, employee	
15 Q6-124-0	A clear timeline and steps of the integration as soon as they are determined	1	team, integration, people, update, clear, email, good, plan, regard, employee	
5 Q6-128-0	More communication from our direct team regarding the integration	1	team, integration, people, update, clear, email, good, plan, regard, employee	
10 Q6-134-0	I love to see pictures and I think that seeing pictures of what is really happening would be interesting	1	team, integration, people, update, clear, email, good, plan, regard, employee	
17 Q6-143-0	Weekly email updates on where we are at with the finance initiatives	1	team, integration, people, update, clear, email, good, plan, regard, employee	
16 Q6-148-0	Make legacy CBS people feel like they are important and not just disposable	1	team, integration, people, update, clear, email, good, plan, regard, employee	
6 Q6-149-0	Not being completely shut out as to what is being discussed regarding merging departments	1	team, integration, people, update, clear, email, good, plan, regard, employee	
3 Q6-152-0	Facilitating access for everyone to view integration roadmap updated timely through Slack	1	team, integration, people, update, clear, email, good, plan, regard, employee	
13 Q6-155-0	Employees working together during integration	1	team, integration, people, update, clear, email, good, plan, regard, employee	
Showing 1 to 10 of 80 entries		Previous	1	2 3 4 5 ... 8 Next

Dealing With Errors

A couple of errors may arise while using this app. The most common error likely to be received is a formatting error. If you receive the following message, refer to the [File Formatting](#) section of this guide and check that your Excel file meets the requirements. Then re-upload your file to Slack and send the message *Analyze my file* to restart the process.

Survey Analyzer APP 2:06 PM

MarComms Town Hall - June 11.xlsx has been sent to the server for processing.
 If you do not receive a confirmation message within a few minutes, please try again.
 REF_ID: F017893QCKZ

There is a formatting error with your file. Please make sure your Excel file is formatted properly and re-share.

Other potential errors messages include

Survey Analyzer APP 7:31 PM

Invalid Lambda Response: Received error response from Lambda: Unhandled

Survey Analyzer APP 2:06 PM

MarComms Town Hall - June 11.xlsx has been sent to the server for processing.
 If you do not receive a confirmation message within a few minutes, please try again.
 REF_ID: F017893QCKZ

Your file cannot be found. Please re-share the file and try again.

Survey Analyzer APP 2:06 PM

MarComms Town Hall - June 11.xlsx has been sent to the server for processing.
 If you do not receive a confirmation message within a few minutes, please try again.
 REF_ID: F017893QCKZ

Your file has been received. Please allow up to 15 minutes for processing.

There has been an error during the analysis. Please try again.

If you receive any of these messages, please contact Matthew.Moocarme@viacom.com with you REF_ID for assistance.