Annual Integrated Economic Survey Pilot: Phase III Preliminary Findings and Recommendations

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Good morning! I'm Melissa Cidade a survey methodologist in EWD.

While I'm doing the talking, today's presentation is a collaborative effort between myself and my friend and colleague Heidi St.Onge, thank you for your work on all of this, Heidi!

And, while I'm giving shout outs, let me pause here and recognize that today's presentation is representative of efforts from across the Economic Directorate – thank you so much to the respondent research team and the emerging methods team in ESMD, to the contact strategy and data handling teams in EMD, and to the production and account management teams in EWD for your tremendous work over the last six months or so – we simply would not be here today without your meticulosity, creativity, and dedication.

Today we are talking about the preliminary findings and recommendations from Phase III of the AIES Pilot, affectionately known as the Dress Rehearsal. There's a lot to cover, so please hold your questions until the end of my prepared remarks. I'll talk for about 40 minutes, and then we will have about 20 minutes for questions, clarifications, and discussion. If you think your team needs a rehash of this presentation, please reach out to Heidi and I and we can schedule additional conversations about these findings and recommendations. Note that we are scheduled to present a cleared version of this presentation at EAMS on Thursday, January 25 at 2:30 pm.

Let’s jump right in…

AIES Pilot Overview

Phase I: "The 78" Pilot 2022

- Goal: Understand response processes and further instrument refining
- Qualtrics instrument, 78 companies

Phase II: Response Spreadsheet Pilot 2023

- Goal: Induce independent response
- Response spreadsheet, about 900 companies

Phase III: 2022 AIES (Dress Rehearsal)

- Goal: Troubleshooting and infrastructure building
- New Centurion instrument, about 8,000 companies

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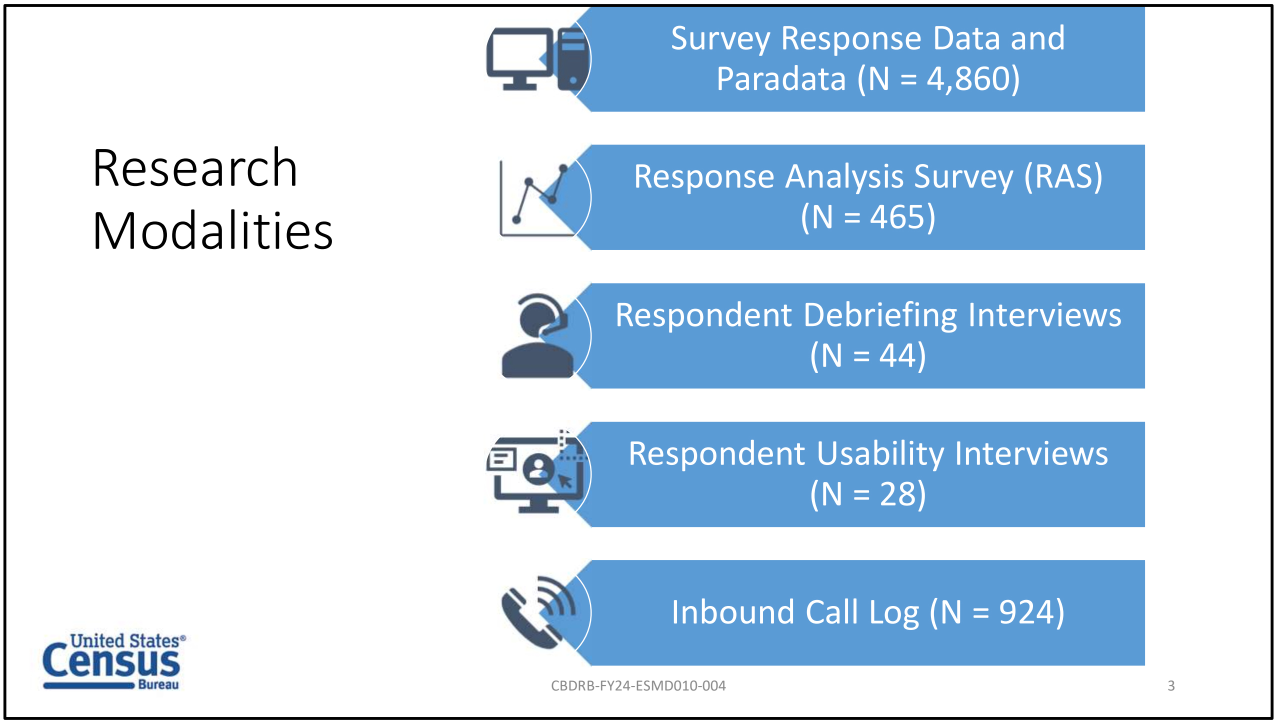
Today we are talking about the findings and recommendations for Phase III of the AIES Pilot. You'll remember that Phase I was last year and was 78 total companies and run through Qualtrics. Phase II was earlier this year, was about 900 companies, and used the spreadsheets. If you want to refresh your memory on these earlier rounds of research, check out the recordings from the January and August EAMS presentations we gave earlier this year.

Today, we are looking at Phase III – the largest and last of the research collections in support of the March 2024 launch.



As in previous rounds, we are drawing on a number of research modalities for today's presentation. First, we conducted a preliminary review of the response data to the survey and the corresponding paradata. We conducted a Response Analysis Survey of respondents, a short survey sent within two weeks of submitting the DR instrument. We conducted 44 debriefing interviews with respondents to get their feedback on the survey. We also conducted 28 interviews dedicated to usability to better understand how respondents interacted with the instrument. And, we did a first look at the inbound call log in support of this survey for additional feedback from the field, especially issues respondents were facing. Again, thank you to each of the teams that supported these collections – brought together, these activities provide a window into instrument performance for the Dress Rehearsal.

If you would like more information about any of these modalities, we can have separate briefings from the teams that conducted each of them. There is more information contained in their reporting than I can possibly include in this presentation, and I encourage this group to explore the nuances of each of these methodologies for additional insight into instrument performance.

Goal	Recommendation	Usability Testing	Dress Rehearsal	Future Research
Get feedback on the new flow	Test new survey flow in AIES Dress Rehearsal collection.	x	x	
Test key elements of the spreadsheet design	Include functionality to clean up establishment lists	x	x	
	Consider functionality to orient respondents within the spreadsheet	x		
	Continue to explore ways of communicating optionality at the unit level.	x		x
Gain additional information about response burden	Explore other ways of collecting non-numeric responses.	x	x	
	Prime respondents for the change		x	
	Consider cutting content			x
Develop respondent communications	Continue to develop response support materials.	x	x	
	Consider response support training.		x	
	Update letters to retain resonant messaging and drop discouraging messaging.		x	
	Consider additional research into communications materials.		x	x

With that much information coming in, we could talk about results for hours. To keep us focused, let's remember that after Phase II, we had some research questions that needed further investigation. Some of these we could test in the Dress Rehearsal – this is what we'll cover today. On screen now is a table that ended our last presentation at the end of Phase II, with the goals for investigation this round. Throughout this presentation, we will talk about these four goals – note that we have color-coded this presentation to orient you through these goals as we talk through them.

(click)First, we wanted to test out the three step flow of the survey. (click) Then, we had some lingering questions about the respond-by-spreadsheet method we are using for the granular data on this survey. (click) Next, we wanted to learn more about respondent burden. (click) Finally, we wanted to test out additional respondent communications materials.

1 Get feedback on the new flow

Three-step structure

Linear design

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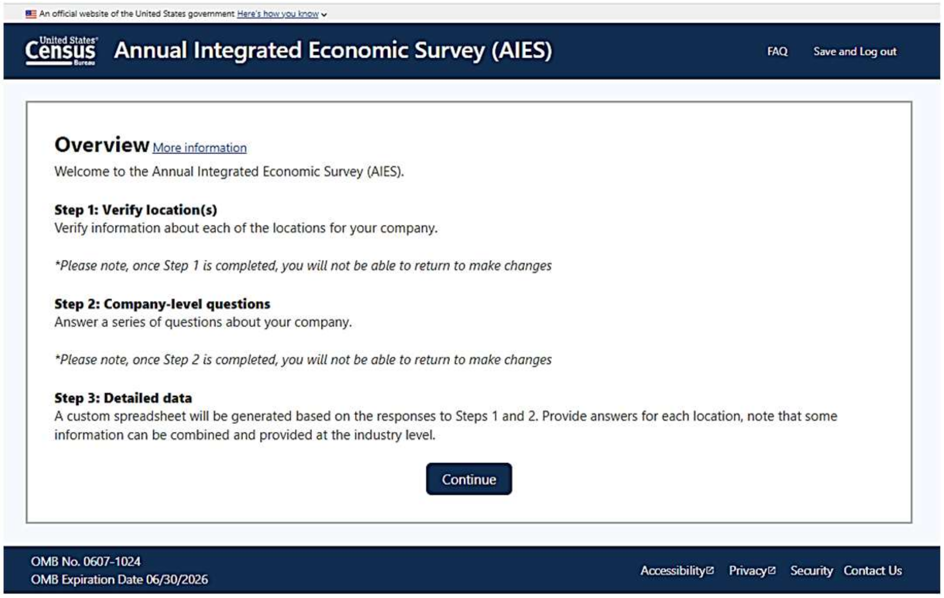
First up, let's talk about Goal 1: to get feedback on the new flow. This includes the layout – three discrete steps to complete – and the linear design, each step coming sequentially after the other.



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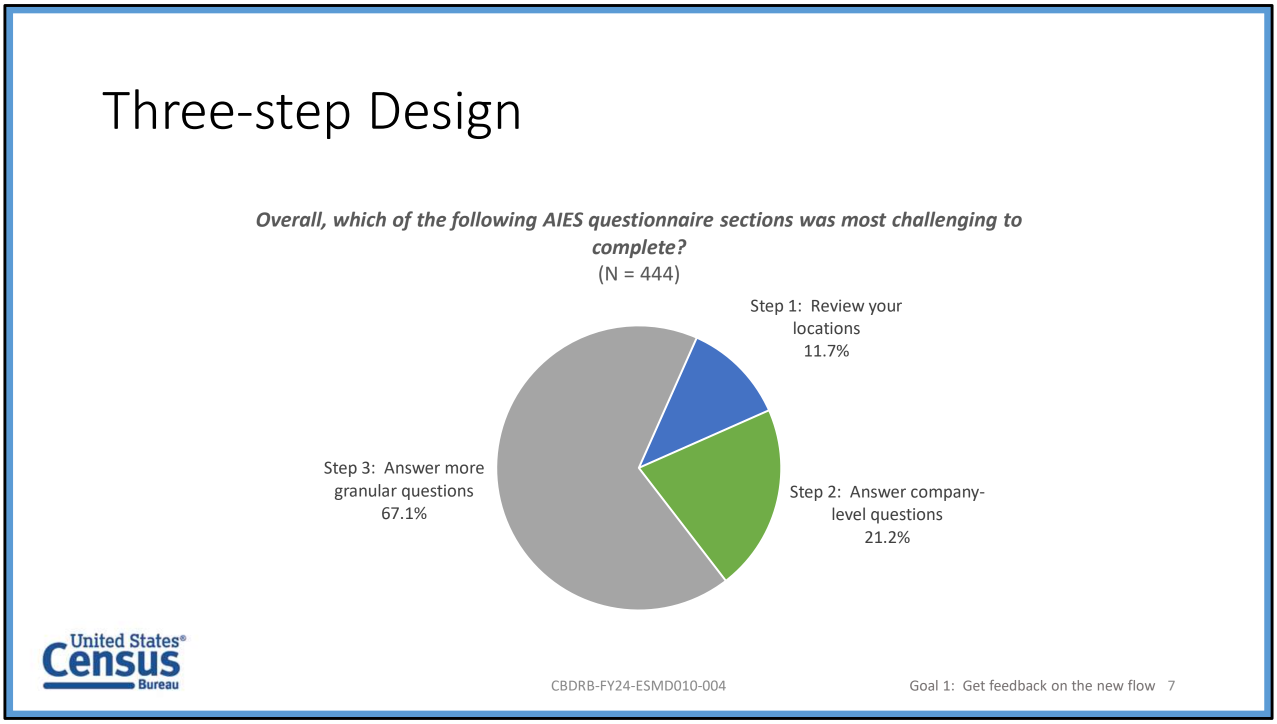
Goal 1: Get feedback on the new flow 6

Remember that the Dress Rehearsal Instrument was the first time we implemented the three step response layout that came as a recommendation from Phase I. Respondent first saw this screen at the start of the survey, outlining that there were three steps to completion…



We asked respondents on the Response Analysis Survey to identify the most challenging section of the survey, and about two in three said it was Step 3 – answer more granular questions. This is the step where respondents have the option of answering by online spreadsheet or by downloading an Excel file, filling it out, and then submitting it through the survey.

Finding 1: The three-step design needs additional support.

- "It would be nice to have all parts of the survey available at once, **not having to wait until a step was completed to move on to the next step**." – RAS

- "I didn't know how many steps there were. I crossed my fingers, is this the end of it? You didn't know what they were going to ask on the next step. **There was no way to get a full view of what are all the questions going to be, what are all the steps?** It was all unknown until you tried to do it." – Debriefing Interview

- "[The survey was] **disjointed, not user friendly**. The first two [sections] were typical, third section was different and I really didn't care for it, I downloaded the template and then upload when done. I wasn't very familiar with it, **didn't like that the whole survey wasn't in one format**." – Debriefing Interview

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In fact, we find that some respondents mentioned that the three-step flow of the survey is challenging – but not necessarily because of the structure of the survey. The first quote from the Response Analysis Survey, where the respondent mentions "not having to wait until a step was complete to move to the next step" is more about the inability to move back and forth through the survey than the actual structure of the survey, something we'll talk more about in a minute. The second quote from a debriefing interview highlights another finding we'll talk about in a minute, the need for a survey preview, where the respondent mentions "there was no way to get a full view of what are all the questions going to be, what are all the steps." And, in the third quote, the respondent is having a negative visceral reaction to the new format, calling it "disjointed" and "not user friendly," and saying that they "didn't like that the whole survey wasn't in one format."

This brings us to the first finding for the Dress Rehearsal: the three-step design needs additional support and features. That is to say that while there is evidence that some respondents don't like the survey structure broken into the three steps, most of the negative feedback about the structure had more to do with the needs for instrument flexibility and survey previews.

Linear design – Survey Break Points

- Step 1: All of the buttons are blue and say “resume”
- Step 2: Remarks screen
- Step 3: Estimated time to complete screen

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Goal 1: Get feedback on the new flow 9

Let’s turn our attention, then, to this question of the linear design of the survey. The Dress Rehearsal instrument was designed to be answered unidirectionally – respondents answer step 1, 2, and 3 in turn and do not return to earlier steps in the survey once completed. We designed the survey in a linear fashion so that changes made by respondents to establishment listings in Step 1 could be generated on-the-fly in the spreadsheet in Step 3.

Each of these delineations is a survey break point – a spot after which the respondent cannot return to the previous screens. In Step 1, this happens after the respondent has updated information about their establishments and answered additional follow-up questions where appropriate. In Step 2, after the substantive questions we provide a space for remarks about the Step 2 response, and once a respondent clicks save and continue after that remarks capture, they cannot go backwards. And, in Step 3, after the completion of the spreadsheet – either online or downloaded and uploaded back to the system – the respondent is asked a few questions about who completed the survey and how long it took to complete; that screen represents the final break point for the survey after which respondents cannot alter any of their previous data.

Finding 2: Linear design suppressed response.

The Flipper

"I put in 1's to go through it to see what questions there were and at the end it only allowed me to submit so I couldn't change my answers to the actual instead of the $1 placeholder." – RAS

The Quality Controller

"Detailed uploads were not matching totals entered in Part 1 that were **uneditable**." – RAS

The Reviewer

"[I] would like the ability to be able to review questionnaire responses before submitting. There should be an option at the end to **preview survey responses so someone other than the preparer could review for accuracy before submission**. The inability to go back and edit after answering a question is **risky**." – Debriefing Interview

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What we find in the data is that the linear design is not conducive to response. We see three major typologies of respondents that illustrate why this layout was so problematic: the flipper, the quality controller, and the reviewer.

The Flipper is a respondent who wants to look through the survey to see what questions are coming up, what data to collect, or out of curiosity to understand what to expect. These respondents – like the quote on screen – often put dummy data into the survey to be able to advance, not realizing that they could not come back later to change their responses to the actual values. This again speaks to the need for more robust survey preview so that respondents do not have to move through the actual survey to anticipate which questions they will be answering. Next, we have the Quality Controller – these respondents want the ability to check their company-totals to the establishment or KAU level reporting. The quote for the Quality Controller highlights this: the response in Step 3 doesn't match the response in Step 1 because it was "uneditable" at that point. Finally, we have The Reviewer – these respondents either want the ability to one last review of the entirety of their response or they are mandated by their company to have someone else review and approve their submission prior to release. The quote here is representative of the second type, with the respondent noting a want to "preview survey responses so someone other than the preparer could review for accuracy before submission," calling the lack of this functionality "risky."

And, we have our second finding for the Dress Rehearsal: the linear design suppressed response. It is impeding accurate survey reporting for respondents.

Recommendations: *Get feedback on the new structure*

Phase III Goal	Finding	Recommendation
Three-step design	The three-step design needs additional support.	Include flexible navigation and a more robust means of survey previewing.
Linear design	Linear design suppressed response.	Explore the ability to move more freely throughout the survey.

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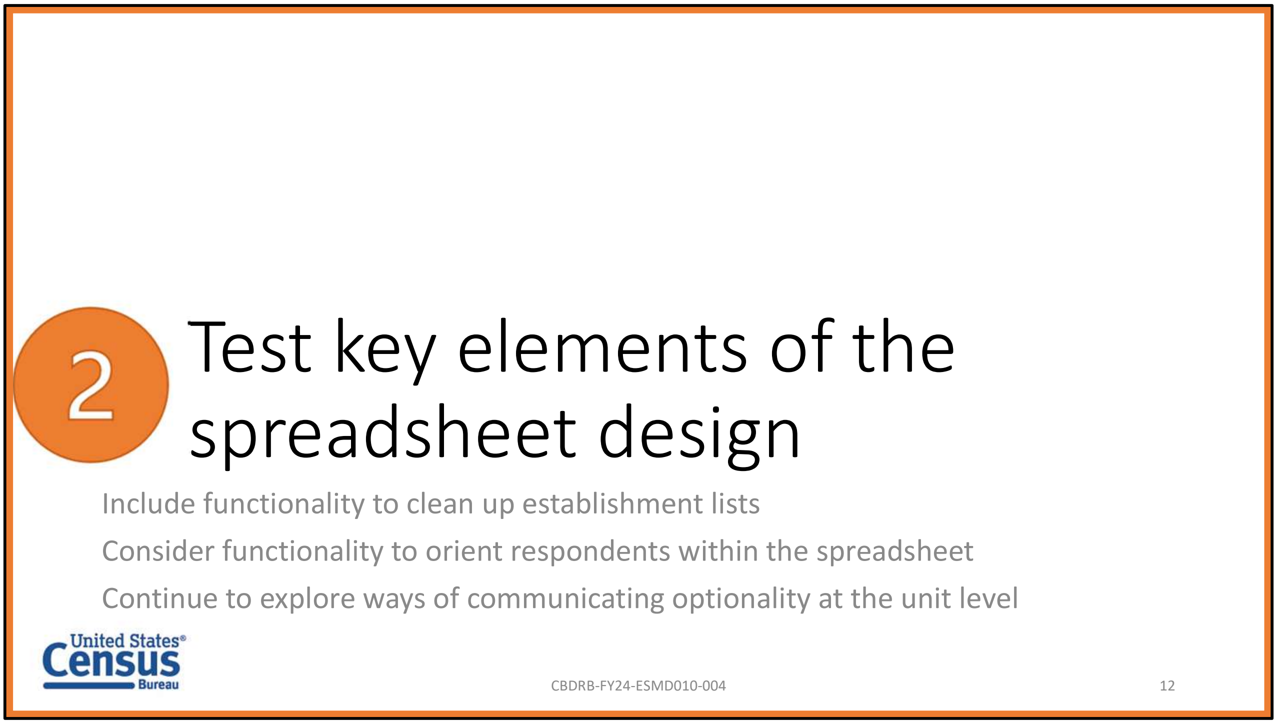
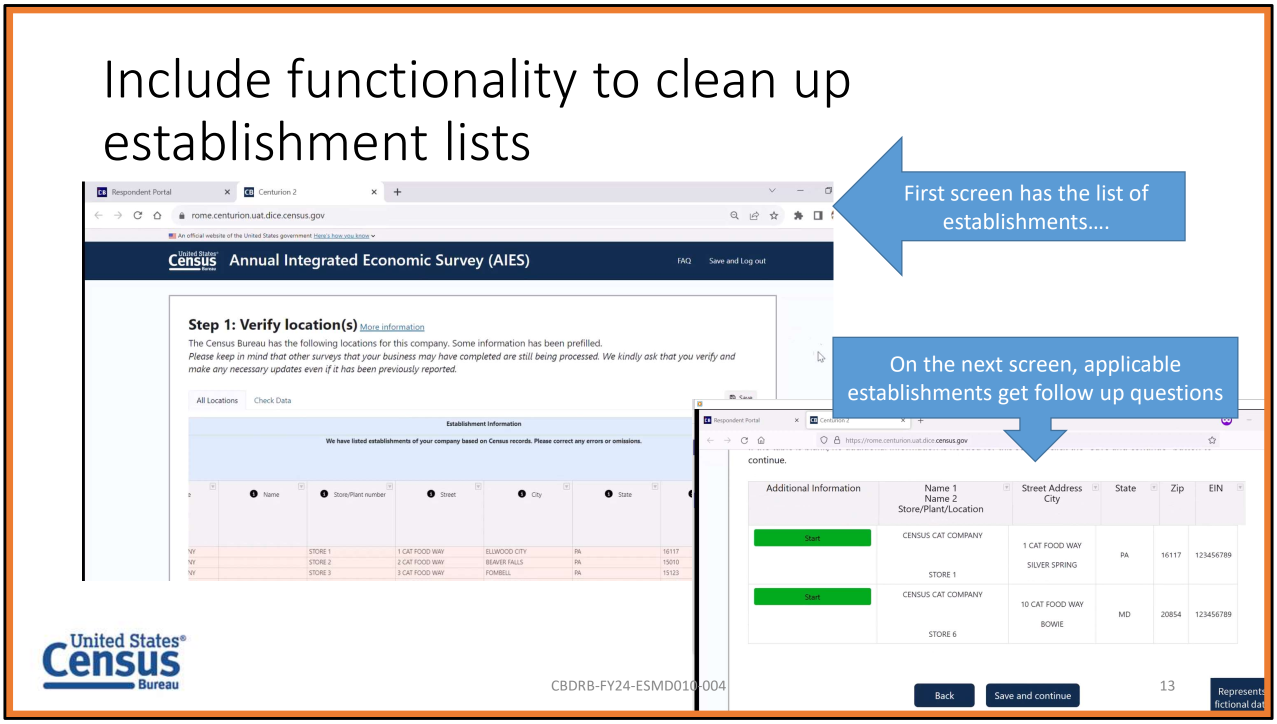
Ok, let's pause here and take stock – we found that the three-step design is not impeding response, but needs additional supports like flexible navigation and survey previews. At the same time, we learned that the linear design of the instrument is impeding response and needs reconsideration. This includes the recommendation to allow for more free movement throughout the survey.



Let’s keep going. Next up, we wanted to test key elements of the spreadsheet design in the first Centurion rendered version of the instrument. Let’s take a look at each in turn…



In Phases I and II, we heard from respondents that the pre-listing of establishments based on previous response could be challenging. Lists were often out of date, missing locations or including nonoperational or other out of scope locations. (click)For Phase III, we included in Step 1 the functionality to review the prelisted establishments and clean up the lists – a housekeeping exercise so to speak. Respondents were presented with their list in an online spreadsheet, and could not move forward from this list until they updated the operational status of each location. (click) Then, based on their responses to the list, they were taken to a follow-up screen that included tailored questions for applicable locations to gather additional information about the establishment.

Finding 3: Larger companies struggled with Step 1.

Screen Purpose:

"I'm going to type all this stuff in? **Are we waiting for something here? It's not clear which question to fill out to verify.** I'm still confused." – Usability Interview

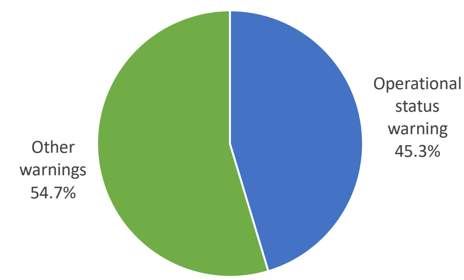
Horizontal Scrolling:

"**I don't know what I'm supposed to verify to move forward**." – Usability Interview

Long Lists:

"In the early stages of the survey (identifying and confirming locations) there's not download/upload option. **Absolutely ridiculous to scroll around a tiny window and make sure things are correct.** We have 800 locations. **Just silly**. Especially when you offer the option later in the survey. **Really stuck on this section for days before even getting the actual survey**." -- RAS

Percentage of triggered warning/error messages by type of message
(N = 68,693)*



*Total number of warning/error messages triggered. Respondents could trigger the same error more than once.

Testing identified three major problems with the functionality for the establishment listing clean up. First, usability testing demonstrated that respondents were not clear on what action to take upon reaching the first screen for Step 1. In fact, every user involved in the usability testing assumed that they could verify the locations by reading the information and clicking save and continue to go to the next step. Every single participant received the error indicating that they must input a value to record each establishments operational status. The quote on screen demonstrates this confusion, as the respondent asks "are we waiting for something here? It's not clear which question to fill out to verify."

Relatedly, respondents struggled with the horizontal scrolling on this screen because questions were over to the right of the visual field. Users did not scroll right to see the rest of the spreadsheet on Step One. They did not know they had to answer questions for each establishment because they did not scroll to the right and see them. Many users remained entirely unaware of the survey questions until they received an error after attempting to move forward, as demonstrated by the second quote where the respondent says "I don't know what I'm supposed to verify to move forward."

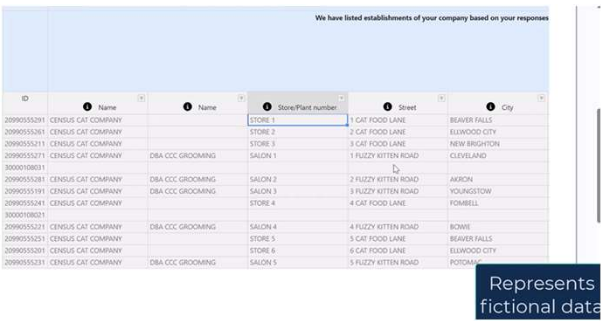
Finally, we found that this step was especially challenging for our largest responding businesses. The third quote on screen illustrates the issue of long lists of establishments, where the respondent notes that it is “absolutely ridiculous to scroll around a tiny window and make sure things are correct” as their business has 800 locations. They called this layout “just silly” and notes that they were “really stuck on this section for days before even getting the actual survey.”

We looked at the paradata and note that almost half of all of the error messages that were trigged using the survey were at this step 1, reinforcing that respondents did not initially know how to move forward in the survey.

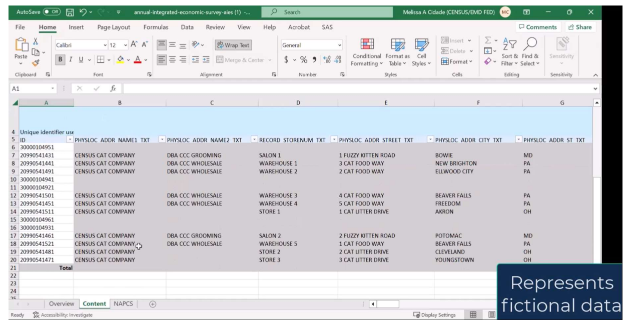
So, the third finding here is that companies are struggling with Step 1, and especially our largest companies are struggling with Step 1. We’ll need to consider other ways to approach cleaning up establishment listings.

Consider functionality to orient respondents within the spreadsheet

Online Spreadsheet



Download Spreadsheet



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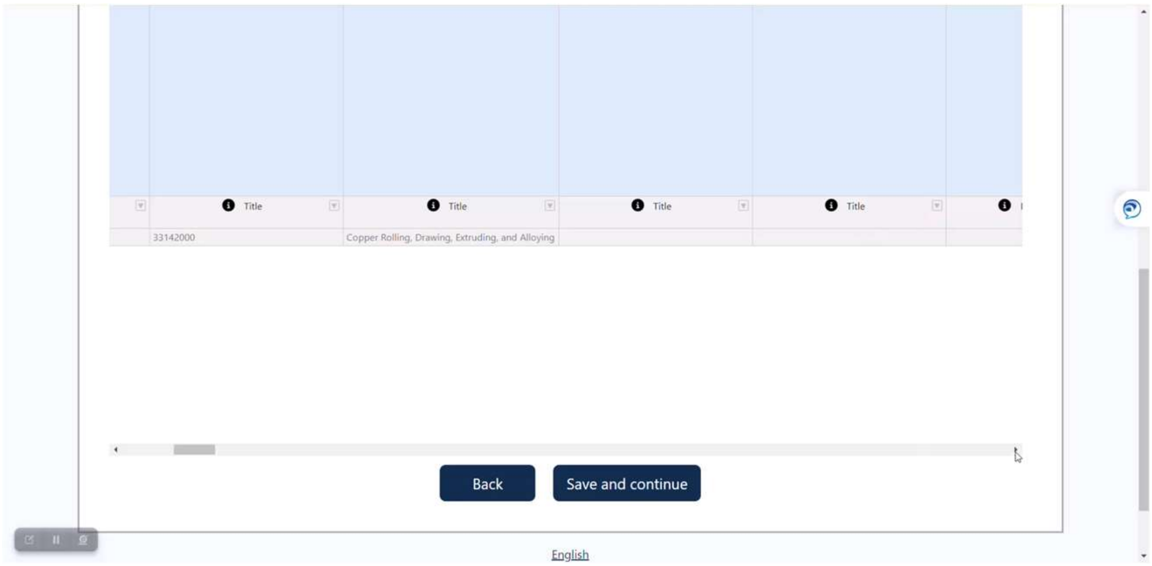
Next up, we learned in Phase II that respondents were getting lost in the spreadsheets – the AIES has a high volume of questions, and especially for very large companies, their response spreadsheets can get unwieldy.

While we could integrate some functionality to help respondents navigate the spreadsheets – like the ability to filter columns – we could not integrate other means of orienting respondents in this round of the instrument.



Clip of a respondent during a usability interview

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Goal 2: Test the spreadsheet 16

And as a result, the spreadsheet – online and download/upload – was challenging for respondents to navigate. Throughout each of the different research modalities, we see convergence around this major finding: Respondents are getting lost in the spreadsheet and it is leading to confusion and frustration, and is impeding response. Let's watch this first respondent during a usability interview navigate the spreadsheet. (Play video) Notice how the issue revolves around staying oriented in the spreadsheet while finding the question, the correct unit, and the response capture.

Finding 4: Respondents get lost in the spreadsheet.

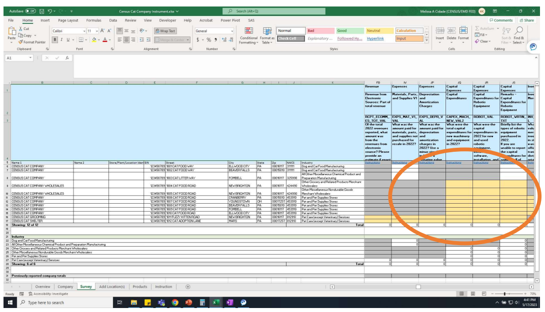
“**The set up of the questions ran horizontally and I had to keep scrolling up to see other parts of the question**. The design was extremely poor. “ – RAS

“You had to scroll horizonal instead of vertical, and as you scrolled right, I had to keep going back to see what line I am on, **am I entering in the right information?** A freeze pane view would be good, or vertical presentation so you can scroll that way.” – Debriefing Interview

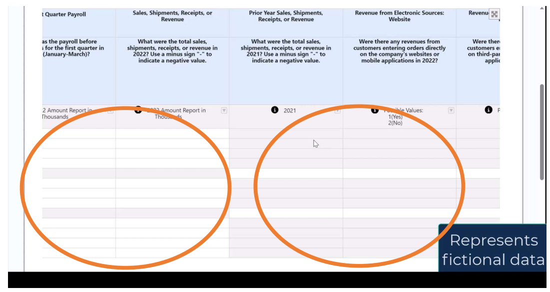
The first respondent on screen here is from the Response Analysis Survey and described the issue in that “the set up of the questions ran horizontally and I had to keep scrolling up to see other parts of the question.” Similarly, in the second quote, the respondent asks “am I entering in the right information?” This is an issue we will need to address moving forward.

Continue to explore ways of communicating optionality at the unit level

Phase II Spreadsheet



Phase III Spreadsheet



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Goal 2: Test the spreadsheet 18

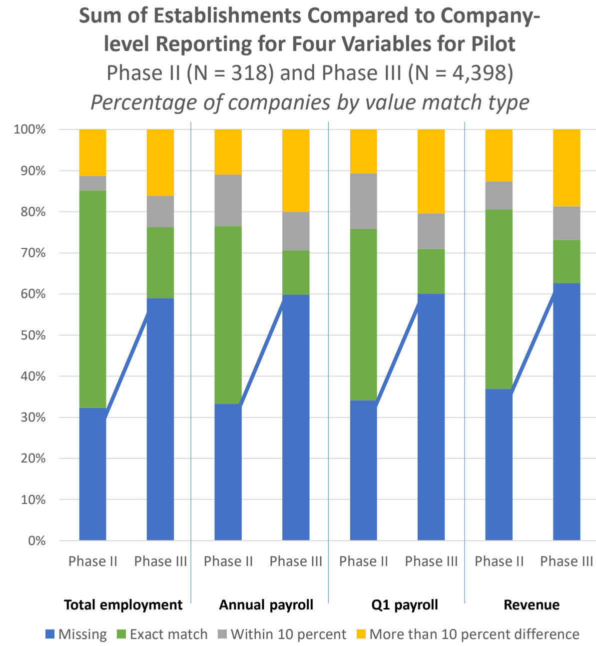
Next up, we have the continuation of the unit problem in the AIES. AIES collects data at the company level, the establishment or location level, and the industry level - aggregations of locations that do or make the same thing, sometimes called Kind of Activity Units or KAUs. For the Phase II instrument, on the left, you'll remember that we experimented with optionality at the unit level (click) by color coding response. We found that respondents didn't really get it, confusing optionality at the unit level with optionality at the question level.

For the Phase III instrument, instead, we went back to standardized aggregation for almost all content at the KAU for non-manufacturing collection. (click) Questions that were required by location are white for the locations and gray for the KAU; (click) likewise, questions that are required at KAU are in white at KAU and gray at location.

Finding 5: Respondents struggled with units.

- "**First two rows are a glitch. I would just skip them and ignore them** if it's just the two rows, that doesn't give me information of which location you're referring to." – Usability Interview

- "**One of [their] KAU lines is completely grayed out and will not allow [them] to enter data** even though [they have] data to report for that industry that was included in company-level totals." – Inbound Call Log



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Goal 2: Test the spreadsheet 19

This brings us to finding 5 – respondents continue to struggle with the units in the AIES. On the left are two quotes about reporting by the KAU – in the first, the respondent calls the KAU units "a glitch" and states that they "would just skip them and ignore them." In the second, a respondent has called in to report that "one of their KAU lines is completely grayed out and will not allow them to enter data," suggesting that KAUs performance in the survey itself might be inconsistent. On the right, I draw your attention to what we've been calling "the big four" since the start of this work – four key items that are asked at the establishment level and then compared back to company level reporting as a makeshift measure of reporting quality. (click) We note that for each of these four questions, we saw an increase in the proportion of businesses for which either the company-level reporting or one or more establishment-level reporting was left blank. We suspect that some of this is due to the failure of the linear design, and further encourage investigation into instrument flexibilities to encourage full reporting of these and other data items.

Test other key elements of the spreadsheet design

- **Finding 6: Rounding functionality surprised respondents.**

  "It auto changed to thousands. That **would be fine if it told you that**. It should be an instruction on the front tab, 'please enter in thousands.'" – Usability Interview

- **Finding 7: NAPCS reporting needs additional attention.**
  - Missed
  - Cumbersome
  - Mismatched

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Goal 2: Test the spreadsheet 20

We have two additional findings related to the spreadsheet performance to mention here. First, we note that the automatic rounding functionality surprised respondents, particularly in usability testing. Note the first quote where the respondent isn't opposed to the functionality, that it "would be fine if you told that" up front. It was surprising, not suppressing response.

But, the second finding is that we need to continue to research better ways of collecting the NAPCS data if we are to retain it on this survey. Our testing suggests three major issues with NAPCS collection in the DR: that respondents don't see the NAPCS tab or don't know what it is if they do see it; that reporting NAPCS is cumbersome and confusing especially because of the lack of row labels; and that NAPCS is not reflective of the ways that companies keep their records. We will need to reconsider how we are collecting NAPCS moving forward.

Recommendations: Test key elements of the spreadsheet design

Phase III Goal	Finding	Recommendation
Include functionality to clean up establishment lists	Large companies struggled with Step 1.	Develop download/upload functionality for Step 1.
Consider functionality to orient respondents within the spreadsheet	Respondents get lost in the spreadsheet	Explore ways to freeze pains
Continue to explore ways of communicating optionality at the unit level	Respondents struggled with units.	Update ways of displaying KAUs to cue respondents
Test other key elements of the spreadsheet design	Rounding functionality surprised respondents.	Include instruction that entries will be rounded.
	NAPCS reporting needs additional attention.	Investigate better performing ways of collecting NAPCS.

Ok, let's pause here and review this section on elements of the spreadsheet design. We noted that our largest companies especially are struggling with verifying locations, and recommend developing download/upload functionality for this step similar to the functionality in Step 3. We saw evidence that respondents are getting lost in the spreadsheet, and recommend exploring ways to freeze pains within the spreadsheet so that they can see the location or question at all times. We saw the negative impact of the way we collected KAUs, and suggest updating ways of displaying KAUs to cue respondents, including labeling the row and more explicit instructions about responding at the KAU. And, we learned that respondents were surprised by the rounding functionality – include an instruction about this on the instruction tab on Step 3. Finally, we have evidence that NAPCS reporting is underperforming, and suggest additional investigation into ways to collect NAPCS moving forward.

3 Gain additional information about response burden

Explore other ways of collecting non-numeric responses.

Prime respondents for the change.

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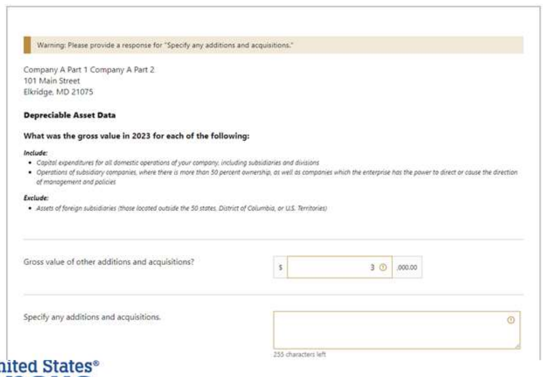
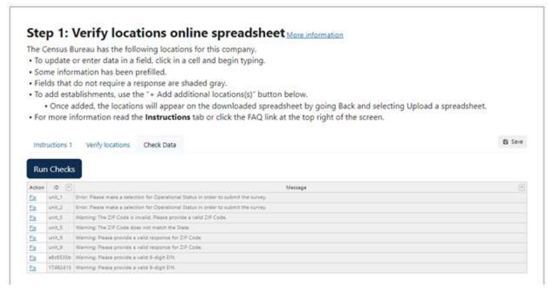
Let's shift gears now and talk about burden, something we've been tracking since the start of this program.

Explore other ways of collecting non-numeric responses.

Step 2: Banner Messages



Step 3: List Messages



Up first, we noted in Phase II that non-numeric questions – those that asked for categorical response like yes/no or major activity codes – were underperforming in the grid format. One suggestion coming out of this work was to include hard and soft edit checks in the instrument to cue respondents into issues in response.

On the left is an example of a soft edit check within Step 2, company-level response. These warnings are displayed as banners across the top of the relevant screen. On the right is an example of warnings in Step 3, the spreadsheet response. These warnings are listed, with a 'fix' feature to bring respondents back to the issue that triggered the error or warning.

As an aside, we call soft edit checks – those issues identified within the data that are still acceptable for response – "warnings." We call hard edit checks – those issues identified with the data that prevent the submission of data – "errors." From here, I will use "error checking" to encompass both warnings and errors.

Finding 8: Error checking needs additional development.

- **Automate when possible:**

"It didn't force me to do a data check…**never went to the check data tab**; **normally [the survey] would throw me into the data check**- or error out the column." – Usability Interview

- **Redirect to the problem when possible:**

"**The whole row is highlighted.**
It doesn't take you right to it?
Not that clear." – Usability Interview

- **Reconsider error checking report:**

"[My response generated] an error. The error report was **really weird.** It said it passed and then it had errors. **I don't understand that.**" – Debriefing Interview

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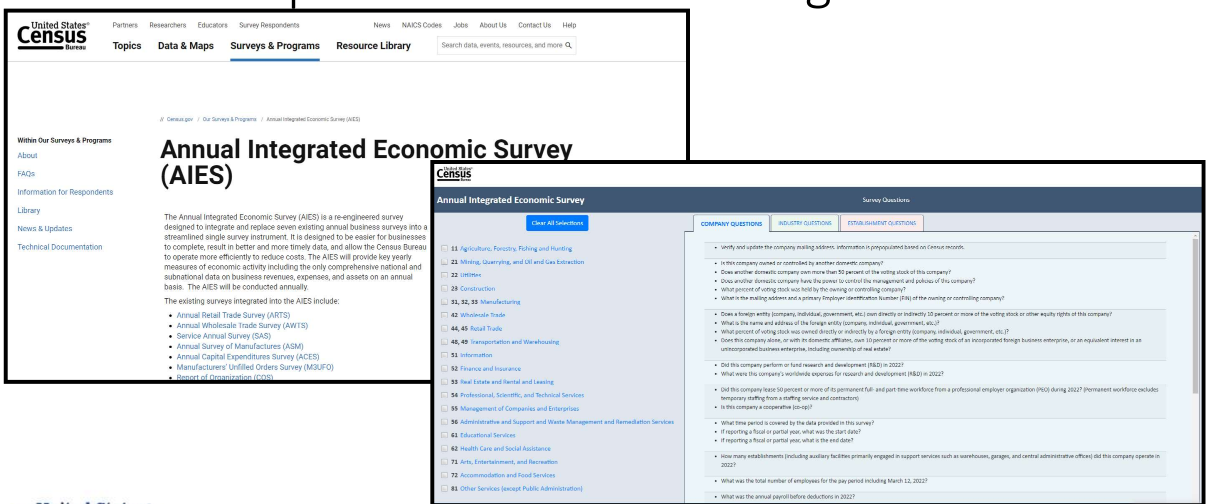
Goal 3: Response Burden 24

Generally, we find that error checking needs additional development as the instrument progresses. First, respondents noted that error checking was not required and was not running automatically. The first quote notes that the respondent "never went to the check data tab" because "normally [the survey] would throw me into the data check", indicating both that they did not run the check, and that they expected this to be an automatic process. We may want to automate this step when possible.

In the second quote, the respondent runs the error check on Step 3 and then notes that "the whole row is highlighted" – that is, the error check highlights the entire row and not the specific data issue. In this case, they are expecting to be automatically brought to the issue, and we suggest this may be functionality to consider in future iterations of the survey.

And finally, respondents noted that the results of the error checking were incongruently labeled – the report says "Pass" in large green letters, and then lists a set of errors. This is because the respondent had triggered soft edit check warning – nonfatal errors that do not have to be changed in order to successfully submit the data. The respondent described this as "really weird" and literally "I don't understand that." In future iterations of the survey, we should consider labeling this report more clearly, while encouraging respondents to update items that failed edit checks.

Prime respondents for the change



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Goal 3: Response Burden 25

Last round, we found that just by changing the survey, we are increasing response burden at least for the first few years of collection. One of the recommendations coming out of that finding was to prime respondents that the AIES would be coming, it would be different, and they could prepare. Later in this presentation we'll walk through some of the findings related to the letters and email communications we developed for this round of collection, but here, we highlight the other ways we attempted to prime respondents for this change. We launched the new AIES website, pictured left, and tried out the first prototype of an interactive content selector tool to serve as a means of helping respondents to prepare for the AIES.

Finding 9: Respondents rely on a survey preview.

- "To make it easier for us, we need to have an overview of what the report is asking for. **Other surveys have PDF or excel version** that we can download and see what the whole survey is….**If the survey requires us to reach out to other departments, then it's easier for us to forward** them this [PDF or excel] template and ask them for the information." – Debriefing Interview

- Respondent **asked about pdf to preview questions, whether there were more questions after the Remarks section,** how to share parts of the survey with others and whether they'll be able to review responses before submitting them. – Inbound Call Log

- "**Not being able to get the entire survey prior to entering the data in caused significant challenge.** I usually will print the survey out and assign the various pieces to those that are best to complete them. With this survey I had to answer as I went through it." – RAS

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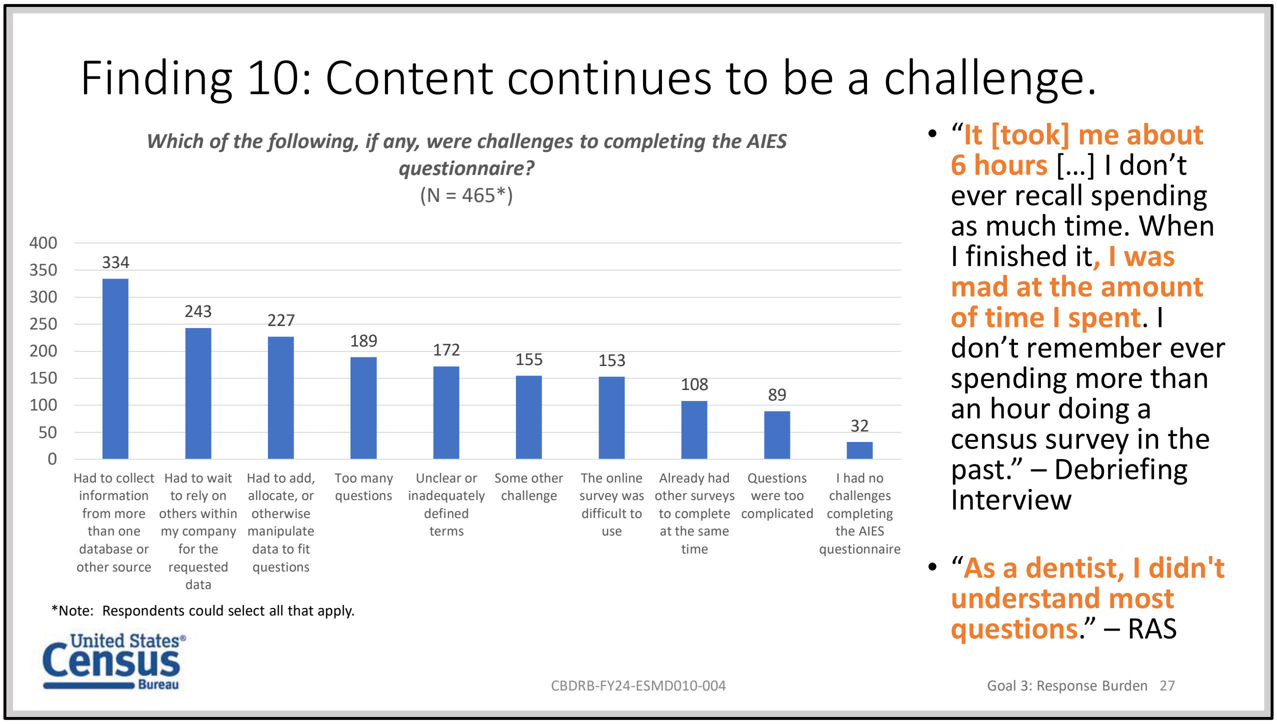
Goal 3: Response Burden 26

Again, across all research modalities, including inbound phone calls, one of the issues loud and clear is finding number 9: Respondents rely on a survey preview. What we provided was not robust enough, it was not accessible enough, and it did not meet the needs of our respondents. This, coupled with the linear design, represents a major issue in the AIES DR collection.

In the first quote, from a debriefing interview, the respondent is noting not only that a survey preview is standard for these kinds of surveys – "other surveys have PDF or Excel versions that we can download" – but also that this is a key component to the response process – "if the survey requires us to reach out to other departments, then it's easier for us to forward" the preview. The second quote, taken from the inbound phone log, notes specifically being "asked about pdf to preview questions" and "whether there were more questions after the Remarks section." The final quote is from the Response Analysis Survey where the respondent writes that "not being able to see the entire survey prior to entering the data in caused significant challenge." The respondent clearly states that the lack of a survey preview suppressed response.



And while we are on the topic of content on the AIES, we have – for the third round in a row – the finding that the survey questions are ambiguous and voluminous – there's too much content and too much of it is confusing to respondents. So, what is making the AIES challenging for respondents? A primary issue is data accessibility for respondents: When asked, the most given response is that respondents had to collect information from more than one database or source, reflecting data dispersion. Similarly, 243 Response Analysis Survey respondents said that the challenge lies from having to wait to rely on others within the company for the requested data. And another 227 said the challenge lies in having to add, allocate, or otherwise manipulate data to fit the question. These represent the top three most selected responses for this question – collecting the data or waiting for others to deliver it, or fitting the company data to match our questions. But, there are other challenges related to the survey content, too. 189 respondents said the challenge was that there are too many questions, while another 172 said there are unclear or inadequately defined terms on the survey. Note that 89 respondents said that the questions were too complicated.

We see this challenge with content in the qualitative data, too – in the first quote, the respondent said they were “mad at the amount of time I spent” estimating that it took them “about six hours” to complete. The second quote: “As a dentist, I didn’t understand most questions” reminds us that content can be challenging both for our largest and our smallest companies.

Recommendations: Gain additional information about response burden

Phase III Goal	Finding	Recommendation
Explore other ways of collecting non-numeric responses.	Error checking needs additional development.	Consider automatically checking submissions.
		Update labels on error checking report.
Prime respondents for the change	Respondents rely on a survey preview.	Make content previews more accessible and easier-to-use.
	Content continues to be a challenge.	Cognitively test misreported content and consider additional cuts.

Let's stop here and consider the findings for our goal to gain additional information about response burden. We wanted to explore other ways of collecting non-numeric responses, and implemented this in the Dress Rehearsal by way of rudimentary error checking. We found that we need a little more work on this: consider error checking as an automatic process for responses, and update the labeling on the error checking report. We also wanted to prime respondents for the changes coming from the AIES – and one way that we did that was through an explicit online presence this round. We found that respondents rely on survey previews to support response, and we recommend additional testing and refinement of the content selection tool as well as making this tool and other documents more accessible to respondents. At the same time, we continue to find that not only is there too much content, but that content is ambiguous or not relevant to respondents. We support additional cognitive testing on misreported content, and encourage survey leadership to consider additional content cuts where appropriate.

4 Develop respondent communications

Continue to develop response support materials.

Update letters to retain resonant messaging and drop discouraging messaging.

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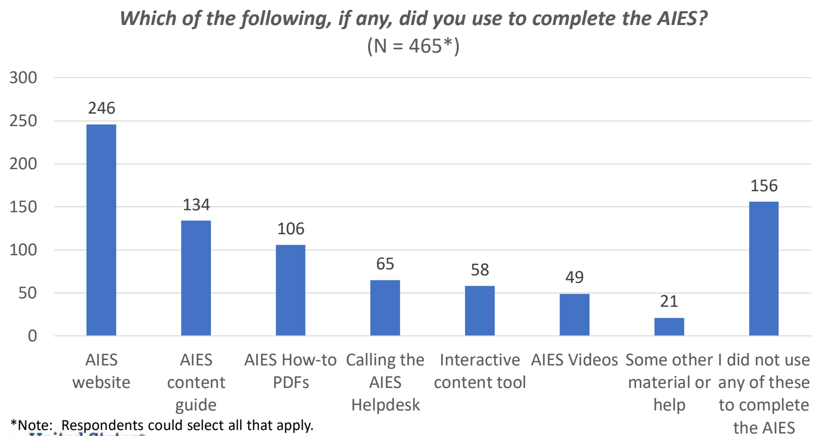
Let's round the corner here on our fourth goal of the Dress Rehearsal: Developing respondent communications.

Continue to develop response support materials.

- **Added phone support**
- **Emails and letters**
- **Account managers**

In Phase I, you'll remember, we phone recruited companies, inviting them to be a part of the research, and all outbound survey communications were through email. In Phase II, we added in paper and email survey communications, and fielding emails and phone calls exclusively with headquarters staff and staff at NPC from across the directorate – an 'all hands on deck' response to supporting respondents. In Phase III, we onboarded telephone support using our typical production phone center staff. This was the first time we've used this modality to support AIES. In this phase, we used a sequential mixed mode contact strategy of mail, email, and for some, telephone follow-up communications. We also continue to look to our account management program, and especially the Full Service Account Manager program, to guide our largest respondents through the process of reporting the AIES.

Finding 11: Respondents report using the materials when they are relevant and accessible.



*Note: Respondents could select all that apply.

- "I tried calling the Help Desk—**they never called back, but I followed up by logging a question on the website itself and I was finally able to get response**." – Debriefing Interview
- "In the documentation we received about completing the survey, **I do not recall seeing** [the Content Summary] which outlines the content & structure of the survey. If I had been aware of this, I would have used it to gather the necessary information before filling out the survey. **That would have been a huge help in planning for the survey**. – RAS

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Goal 4: Communications 31

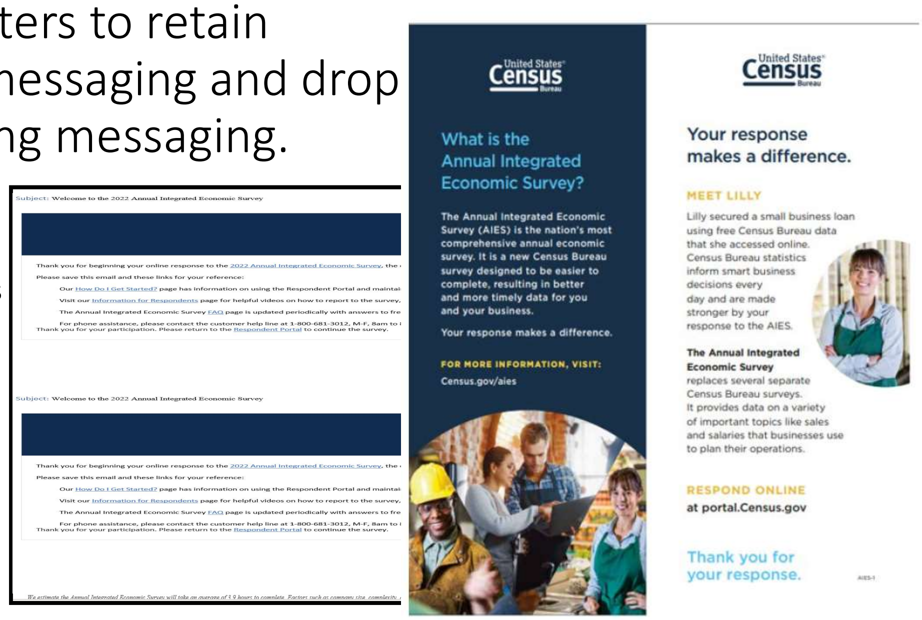
In support of the Dress Rehearsal, we developed a whole suite of response support materials based on feedback we had received in prior rounds of research. On the Response Analysis Survey, we asked respondents specifically about these response support materials that they may or may not have accessed to complete the AIES. The top three selected responses are the AIES website – 246 respondents – the AIES content guide, which is a compendium of all questions asked in the survey – 134 respondents – and the AIES How-to PDFs, which provide additional instructions to use the survey platform – 106 respondents. Note that 156 respondents said that they did not use any of the listed response support materials to complete the AIES. Of those that listed an "other" resource, most mentioned emailing with a specific person at the Census Bureau, or other resources specific to the company, like accountants, prior survey submissions, and others.

I note that respondents are using our response support materials in combination with each other – look at the first quote where the respondent first described calling the Help Desk, but "they never called back, but I followed up by logging a question on the website itself and I was finally able to get a response." The respondent was unsuccessful in the first preferred mode of communication – calling the Help Desk – so they reached out using a secondary mode and was successful. In the second quote, though, we see what happens when our materials are available but not accessible – in the Response Analysis Survey, we provided links to each of the communications we listed. In a write in space, the respondent notes that they do not "recall seeing" this documentation, but that once they saw it on the Response Analysis Survey, it "would have been a huge help in planning for the survey." In this way, it is important not only to make this support available, it must also be easily accessible, connected to the ecosystem of available response support.

Update letters to retain resonant messaging and drop discouraging messaging.

Phase II Finding:

- Many respondents found the list of consolidated surveys intimidating and confusing
- Most respondents are only looking for a few pieces of information in the initial request



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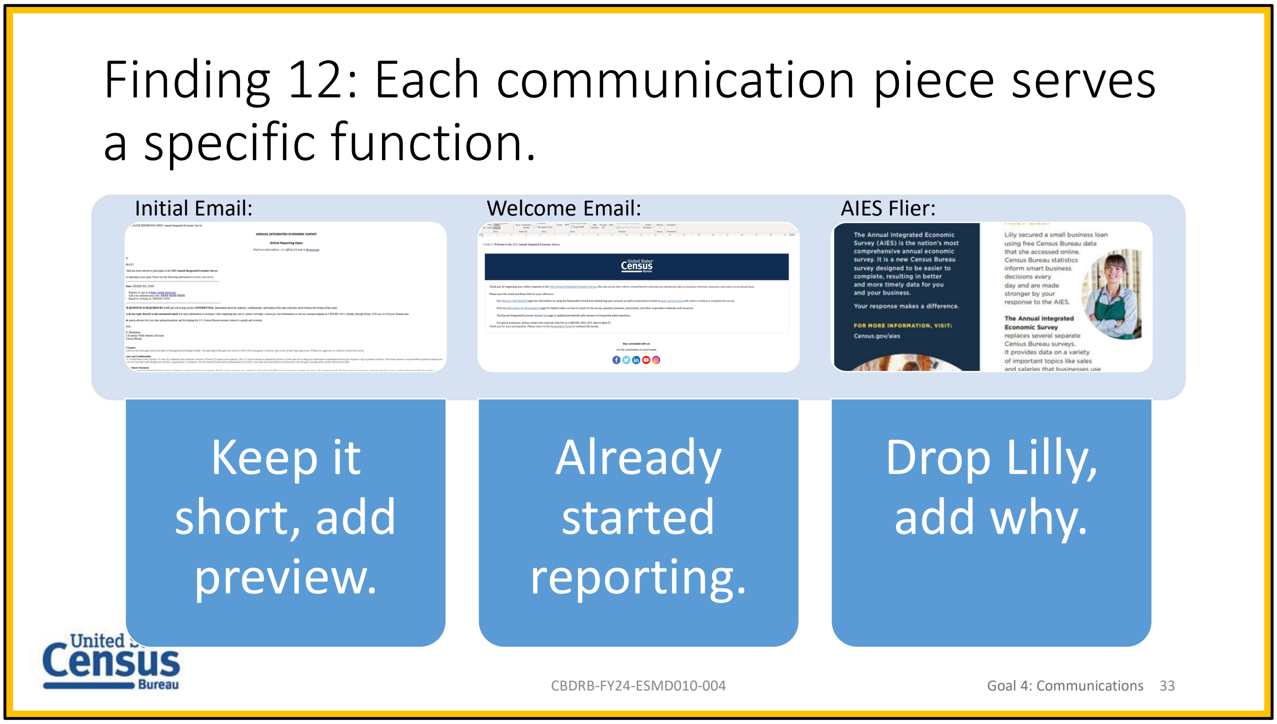
Goal 4: Communications 32

In Phase II, one of the research pieces looked at communications testing to support the Dress Rehearsal. We implemented two major findings – first, that the list of consolidated surveys is intimidating and confusing to respondents, and may suppress response. The second was that respondents were looking for a few key pieces of information in the initial survey request letter.

Initially we suggested a full review of our contact materials and strategies to run parallel to the Dress Rehearsal research; ultimately, we were unable to rally the resources in time to execute that line of research, but we were able to embed a few questions on our respondent debriefing interviews to see how these materials performed in the field about three specific pieces of communications.

On screen now, you can see the initial survey request, quite sparse in messaging, but emphasizing those key pieces of information: Due date, portal address, and authentication code. (click) And here is the so-called "welcome letter" – this short email is automatically sent to the respondent once they enter in the authentication code to access the survey. You'll note that it does not reference the consolidated survey list, and it points the respondent to other response support materials of interest. (click) Finally, using research from the 2022 Economic Census, we also included a flier extending the vignette of Lilly as a respondent to the AIES. Each of these pieces of communication were developed with the findings from the Phase II comms research in mind.



For the initial email, respondents reacted positively to the short messaging. Most indicated that this email spurs them to log in to the portal and enter in the authentication codes. A few mentioned wanting access to a survey preview at this step, so we may want to consider adding a link to the interactive content tool or the content summary documentation.

For the Welcome email, respondents reported that for the most part, they had already started completing the survey when the email was delivered to their inbox. Some found it to be useful, and no one reported that it suppressed response.

And, for the flier, the suggestion is to drop the Lilly vignette – the resonant message is that the AIES is for small businesses, when in fact, AIES is for all businesses. And, respondents suggested emphasizing the “why” of the AIES –messaging like production of the GDP and other uses of the data, and that the survey is mandatory.

This brings us to our last finding of the day: each of the pieces of communication in the Dress Rehearsal serves a particular function, and we need to tailor our communications to that function.

Recommendations: Develop respondent communications

Phase III Goal	Finding	Recommendation
Continue to develop response support materials.	Respondents report using the materials when they are relevant and accessible.	Review the ecosystem of communications materials to ensure that all pieces are accessible.
Update letters to retain resonant messaging and drop discouraging messaging.	Each communication piece serves a specific function.	Additional communications-based research.

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And, here we are at our last recommendations screen. First, we learned that the additional response support materials we had developed were being used by respondents when relevant and accessible. We recommend a review of the communications ecosystem – all letters, emails, websites, videos, tools, in-survey instructions, phone scripts…everything – to ensure that not only are we covering all of the respondent needs, we are doing so in a way that links all of the communications together coherently and consistently. Next, we updated our letters and emails to emphasize resonant messaging, and we learned that each of our pieces of communication serves a specific function in supporting response. We recommend additional research into the best practices for communications materials for a survey as complex as the AIES. This could include additional interviewing, message testing, focus groups, and other modalities designed to better understand communication preferences and needs of our respondents.

	Goal	Finding	Recommendation
1	**Get feedback on the new flow.**	Three-step design	The three-step design needs additional supports.
		Linear design	Linear design suppressed response.
2	**Test key elements of the spreadsheet design.**	Include functionality to clean up establishment lists	Large companies struggled with Step 1.
		Consider functionality to orient respondents within the spreadsheet	Respondents get lost in the spreadsheet
		Continue to explore ways of communicating optionality at the unit level	Respondents struggled with units.
		Test other key elements of the spreadsheet design	Rounding functionality surprised respondents.
			NAPCS reporting needs additional attention.
3	**Gain additional information about response burden.**	Explore other ways of collecting non-numeric responses.	Error checking needs additional development.
		Prime respondents for the change	Respondents rely on a survey preview.
		Content continues to be a challenge.	Cognitively test misreported content and consider additional cuts.
4	**Develop respondent communications**	Continue to develop response support materials.	Respondents report using the materials when they are relevant and accessible.
		Update letters to retain resonant messaging and drop discouraging messaging.	Each communication piece serves a specific function.

Whew….here we are. All of our preliminary findings and recommendations from the AIES Pilot Phase III. (click) We got feedback on the new flow, and found that we need to abandon the linear design, and consider additional supports for the three-step layout. (click) We tested key elements of the spreadsheet design, and found that the establishment listing needs work, that the spreadsheet is big and overwhelming, that units continue to be a source of error, that rounding functionality surprised respondents and that NAPCS underperformed. (click) We gained additional information about response burden, including that our error checking functionality needs some additional development and that respondents rely on a survey preview to support reporting. We also heard that content is continuing to be challenging for respondents. (click) Finally, we wanted to further develop respondent communications, and we found that respondents use the materials we provide when they are accessible, and that each piece of communications serves a particular function to support the response process.

	Goal	Recommendation	Next Steps
1	**Get feedback on the new flow.**	The three-step design needs additional supports.	Further develop survey preview and content selection tool.
		Linear design suppressed response.	Develop ability to move forward and backwards through the survey.
2	**Test key elements of the spreadsheet design.**	Large companies struggled with Step 1.	Provide download/upload functionality for Step 1.
		Respondents get lost in the spreadsheet	Freeze left columns and top rows.
		Respondents struggled with units.	Update KAU display.
		Rounding functionality surprised respondents.	Include instruction on instructions tab.
		NAPCS reporting needs additional attention.	Additional research into NAPCS capture.
3	**Gain additional information about response burden.**	Error checking needs additional development.	Update error labeling and implement automatic error checking.
		Respondents rely on a survey preview.	Further develop survey preview and content selection tool.
		Cognitively test misreported content and consider additional cuts.	Conduct cognitive testing on misreported content.
4	**Develop respondent communications.**	Respondents report using the materials when they are relevant and accessible.	Review website for accessibility and ease of use.
		Each communication piece serves a specific function.	Conduct additional communications-focused research.

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And on this screen, I have the recommendation on the left and the next steps on the right.

	Goal	Recommendation	Next Steps
1	**Get feedback on the new flow.**	The three-step design needs additional supports.	Further develop survey preview and content selection tool.
		Linear design suppressed response.	**Develop ability to move forward and backwards through the survey.**
2	**Test key elements of the spreadsheet design.**	Large companies struggled with Step 1.	**Provide download/upload functionality for Step 1.**
		Respondents get lost in the spreadsheet	**Freeze left columns and top rows.**
		Respondents struggled with units.	**Update KAU display.**
		Rounding functionality surprised respondents.	**Include instruction on instructions tab.**
		NAPCS reporting needs additional attention.	Additional research into NAPCS capture.
3	**Gain additional information about response burden.**	Error checking needs additional development.	**Update error labeling and implement automatic error checking.**
		Respondents rely on a survey preview.	Further develop survey preview and content selection tool.
		Cognitively test misreported content and consider additional cuts.	Conduct cognitive testing on misreported content.
4	**Develop respondent communications.**	Respondents report using the materials when they are relevant and accessible.	Review website for accessibility and ease of use.
		Each communication piece serves a specific function.	Conduct additional communications-focused research.

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These bolded items are ones that are already in the works, and we anticipate will be addressed in time for the March 2024 launch, including the ability to move forward and backward through the survey; providing a download/upload feature for the establishment listing clean up; freezing left columns and top rows to help orient respondents in the spreadsheet; updates to the ways that KAUs are displayed; adding a note about the rounding functionality in instructions; and updating error labeling and automatic error checking. I want to take a moment here to publicly recognize the work that our friends and colleagues in Special Internet Operations Branch in ADSD have been able to accomplish as we have gotten results from the field; because we had so much information coming in so quickly, we were able to start to tackle the big ticket items in preparation for next year.

(click) The next one – further development of the survey preview and content selection tool – is awaiting OMB clearance to get testing in front of respondents, and is already undergoing additional refinements based on feedback from the field. We anticipate a more robust interactive content selection tool in time for March 2024.

(click) This leaves these four items on the table – further investigation into NAPCS; cognitive testing of underperforming content in the survey; a review of the AIES website for accessibility and ease of use; and additional communications-focused research as possible areas of further exploration into 2024. In addition to additional usability interviewing and respondent debriefings, one or more of these may be further explored to support future iterations of the AIES.

Positive feedback, too…

- “One of the things that I like about it because our company has grown significantly by acquisition was being able **to answer all the questions at one time for all of the entities. I really appreciated that.** Versus having multiple surveys that I have had to do historically." – Debriefing Interview

- “When I got to the download spreadsheet, **it was easy**… We actually have 3 to 4 people working on [the survey], compiling it together, and submitting it as one. **It’s a little bit easier when we have the spreadsheet to work with as opposed to manually entering something into a screen**.” – Debriefing Interview

- “Very easy in our system. **The questions on the survey were straightforward. It’s easy to match the questions from the report** that I run so easy to populate.” – Debriefing Interview

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At this point, you may be feeling a little overwhelmed at the scope and breadth of issues this research has identified. I just want to pause for a moment and recognize that the purpose of this work was to identify issues with the AIES – we kind of set ourselves up for some doom and gloom today.

But, all is not lost – as in previous rounds of research, we also got positive feedback from the field, especially renewed enthusiasm in the original point of the AIES: the combining of disparate survey programs. In the first quote, the respondent mentions that the AIES gives them the ability to “answer all the questions at one time for all of the entities” and that they “really appreciated that.”

In the second quote, the respondent notes a preference for the respond-by-spreadsheet design of the AIES, calling it “easy”, especially because of the number of people working on the response, saying that “it’s a little bit easier when we have the spreadsheet to work with as opposed to manually entering something into a screen.” In the third quote, the respondent notes that “the questions on the survey were straightforward,” and that “it’s easy to match the questions” to their internal reporting.

Key Takeaways:

Piloting is worth it!

- Found the showstoppers
- First practice in collection
- Understand sources of burden
- Piloting is a proven method

Additional areas of investigation

- Instrument refinements
- Response support materials development
- Additional research:
  - NAPCS
  - Large-firm response
  - Communications review
  - Cognitive Testing

Ok!! Wow! We've covered a lot of ground today! Your head may be spinning, so I want to end our time today with two key takeaways from the Pilot Phase III.

First: This last year has been grueling – we conducted two rounds of research in less than 12 months, including standing up an entirely new survey in an entirely new system. I know some of you have dismayed at how drafty our house has been, but I want to point out to you that while there are still major issues we've outlined today, this piloting program identified the absolute showstoppers and worked – often in real time – to fix those issues and prepare for next year. That was exactly the point: we need a dress rehearsal, and we got one, for sure! The collaborative and iterative methods we used here allowed us to identify these issues with enough time to start to make changes for 2024. We could not have done that if we hadn't pushed ourselves to stand something up this fall. At the same time, this first practice collection got us our first glimpses at what AIES data may look like, and has bought us invaluable time to develop and refine our data handling strategies beginning in production. We have improved understanding of the sources of burden our respondents are facing, and have been able to pivot across all three iterations to respond to those pain points. In all, piloting is a powerful, proven method that we have executed iteratively three times in support of this new program, and the survey is better off for it.

At the same time, we recognize that drafty was ok for the practice, but in production, we need to patch those holes so to speak. This includes key updates to the survey instrument to address poor instrument performance, and the development of additional response support materials and the accessibility of those materials. We also note the opportunity for additional investigations into NAPCS reporting, large-firm response processes, communications materials, and cognitively testing content.

We have learned so much over our three rounds together – we came together as a team, and we accomplished the improbable: we stood up a harmonized survey instrument to inform and prepare for collection in 2024. The first year will not be perfect, but it will be better because of the work we have put in to date. I am so grateful for the opportunity to be involved in this work, and I am excited to see what we cook up in Year 1.

Thank you!

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That concludes our prepared remarks, thank you so much for your time and attention. If you have more specific questions, or if you want to talk about any of the pilot findings further, please do not hesitate to reach out to either of us!

Goal	Recommendation	Next Steps
Get feedback on the new flow.	The three-step design needs additional supports.	***Further develop survey preview and content selection tool.**
	Linear design suppressed response.	**Develop ability to move forward and backwards through the survey.**
Test key elements of the spreadsheet design.	Large companies struggled with Step 1.	**Provide download/upload functionality for Step 1.**
	Respondents get lost in the spreadsheet	**Freeze left columns and top rows.**
	Respondents struggled with units.	**Update KAU display.**
	Rounding functionality surprised respondents.	**Include instruction on instructions tab.**
	NAPCS reporting needs additional attention.	Additional research into NAPCS capture.
Gain additional information about response burden.	Error checking needs additional development.	**Update error labeling and implement automatic error checking.**
	Respondents rely on a survey preview.	***Further develop survey preview and content selection tool.**
	Cognitively test misreported content and consider additional cuts.	Conduct cognitive testing on misreported content.
Develop respondent communications.	Respondents report using the materials when they are relevant and accessible.	Review website for accessibility and ease of use.
	Each communication piece serves a specific function.	Conduct additional communications-focused research.

Bold – in progress, probable inclusion in 2024
* - awaiting OMB clearance

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I'm going to leave this list up on screen to guide any additional conversation for today. Cheers!