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## Participant Manual

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*Date Last Edited:*  
July 2013

*Class Date:*

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# Choosing a Survey Administration Method



## Why This Course is Important

This course is on choosing a survey administration method to yield the best quality data. At GAO, planning for data collection is a very important part of the overall process of planning and engagement design. Data collection needs to be carefully planned and fully integrated with the rest of all we are doing on an engagement.

Our data collection methodology needs to make sense in terms of answering our researchable question. Using the appropriate survey administration method makes it possible for us to collect appropriate and reliable data, thus allowing us to make the types of statements we expect to be able to make in our product.

## Questions to Ask the Learner after Class

- Did you have any prior experience using any of the survey administration methods covered in this course?
- Was the discussion of the 10 issues that should be considered when deciding on a survey administration method new to you?
- What did you learn about them that you would find useful in your work?
- What factors may delay the final decision on the most appropriate survey administration method until after the pretest?
- Did you find the checklist provided in class useful?
- Can you describe the aspects of the checklist that may be most useful to you?

For more information, contact Training at [training@gao.gov](mailto:training@gao.gov).

# THINKING CRITICALLY

## Choosing a Survey Administration Method

### The Knowledge and Skills This Course Covers

This course is designed to:

- Present the range of questionnaire survey methods used at GAO,
- Introduce a number of important issues to consider when selecting a survey method,
- Evaluate the survey methods based on their strengths and weaknesses for different data collection requirements, and
- Provide tools that will help GAO analysts, with assistance from ARM, select the most appropriate survey method.

With the knowledge gained in this course, participants will have a better understanding of the specific issues involved in the selection of an effective survey method that will help them answer the researchable questions. The decisions are often quite complex.

Various terms related to the topic are defined, such as “questionnaire survey” and “survey method.” The instructor presents information on various survey administration methods, including interviewer-administered methods such as in-person and telephone interviews. Participants also learn about self-administered methods such as mail and fax surveys, web surveys, and electronic questionnaires. Participants learn that the selection of the survey administration method is one of the most important decisions in the survey planning process. The method chosen goes a long way in determining the response rate the survey will achieve and the quality of the data that will be collected. This decision will also affect the amount of resources that will be required, both before and after survey goes into the field.

As the course progresses, the instructor presents information on the survey task timeline and the roles of the engagement team. For example, teams should identify realistic engagement goals and develop basic survey questions to achieve those goals. They should also determine the characteristics of survey respondents and collect needed contact information. Typically, teams also take an active role in pretests. The instructor will also detail ARM’s role.

Finally, participants will learn about the ten issues that should be considered when deciding on the most appropriate survey method; emphasis is placed on the amount of information that must be obtained to make an informed decision. Participants are given a survey administration method checklist and use it in a group exercise that helps them determine the right method based on the scenarios provided.



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# Registrar Information

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<b>Choosing a Survey Administration Method (COAN903)</b>	This course is designed to identify the advantages and disadvantages of alternative methods for collecting survey data. The course covers interviewer- administered, mail, web, electronic, and mixed-mode surveys. The course addresses the GAO competency of critical thinking. The course can be delivered in a team-dedicated format or open enrollment.
<b>Who Should Enroll</b>	Open to all who wish to learn about selecting approaches for delivering surveys.
<b>Prerequisite</b>	None
<b>Advanced Preparation</b>	None
<b>Recommended Related Courses</b>	None
<b>Course Objectives</b>	<ul style="list-style-type: none"><li>• Present the range of questionnaire survey methods used at GAO</li><li>• Introduce a number of important issues to consider when selecting a survey method</li><li>• Evaluate the survey methods based on their strengths and weaknesses for different data collection requirements</li><li>• Provide tools that will help GAO analysts, with assistance from ARM specialists, select an appropriate survey method</li></ul>
<b>Competencies</b>	Thinking Critically
<b>Instructional Method</b>	Classroom
<b>Length</b>	2 hours
<b>CPE Credits</b>	2 (1 government-related)
<b>Course Manager</b>	Linda Hawkins, (202) 512-3094
<b>Course Evaluation</b>	The first business day after the class ends, participants will receive an electronic evaluation. The first question on the evaluation asks whether or not the participant attended and

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completed the entire course. Marking “yes” and going on to complete the course evaluation will automatically update training records to reflect completion data and CPE credit. **Note:** Participants must attend and participate in the **entire** class to be eligible for CPE credit.

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## Agenda

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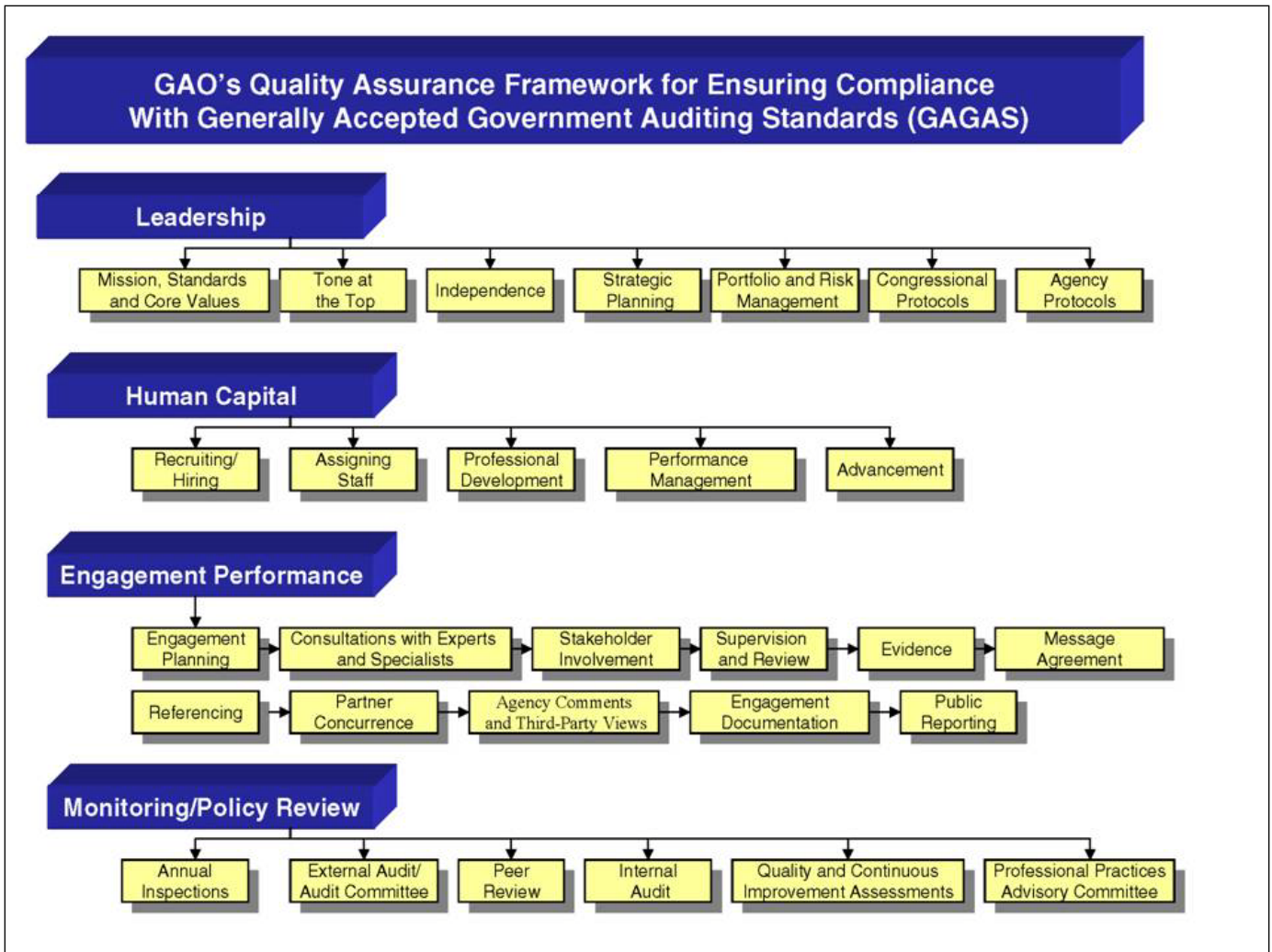
9:00	—	9:10	Introduction
9:10	—	9:30	Overview of Survey Administration Methods
9:30	—	9:50	Issues Involved In The Selection Of A Survey Administration Method
9:50	—	10:20	Strengths and Weaknesses of Different Survey Administration Methods
10:20	—	10:30	Use of the Survey Method Evaluation Checklist
10:30	—	11:00	Class Exercise

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**Agenda**

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# Quality Assurance Framework





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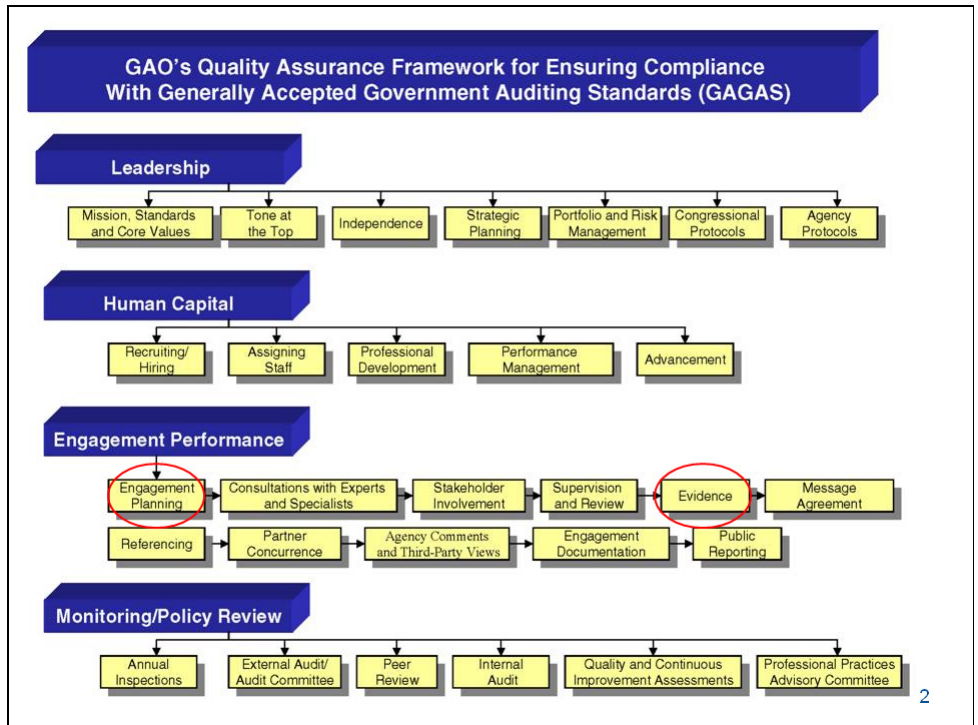
# Choosing a Survey Administration Method

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GAO Training Course  
Applied Research and Methods (ARM)  
Center for Design, Methods, and Analysis (CDMA)

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## Course Objectives

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- To present the range of questionnaire survey administration methods used at GAO
  - To introduce a number of important issues to consider when selecting a survey method
  - To evaluate the survey methods based on their strengths and weaknesses for different data collection requirements
  - To provide tools that will help GAO analysts, with assistance from ARM specialists, select an appropriate survey method
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## Basic Definitions

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**Questionnaire survey:** The process of collecting data from a respondent using a structured instrument (i.e., a questionnaire) and a systematic survey method to help ensure that the collected data are as accurate as possible

**Survey administration method:** The means by which survey data are collected (e.g., structured interviews, mail, web, electronic)

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## Survey Methods: Interviewer-Administered Structured Interviews

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### Face-to-face interviews

- Conducted in-person (by GAO staff)
- Interviewer verbally asks the questions and enters responses
- Either hard copy, computer assisted, or taped

### Telephone interviews

- Conducted by telephone (either by GAO staff or by a contractor)
  - Interviewer verbally asks the questions and enters responses
  - Either hard copy, computer assisted, or taped
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## Survey Methods: Self-Administered (1)

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### Web surveys

- Questionnaire resides on a secure GAO server that the respondent accesses through the web
  - Respondent receives an e-mail which includes the survey URL (address) and a unique username and password
  - Respondent completes the questionnaire via the web in one or more sessions
  - Respondent may also complete one or more questionnaires if appropriate
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## Survey Methods: Self-Administered (2)

### Mail surveys

- Sent out by mail (includes USPS, Fed-Ex, or other carrier)
- Cover letter introduces the questionnaire
- Responses returned by mail or fax

### Electronic surveys

- Usually sent as an attachment to an e-mail: e.g. a Microsoft Word Electronic Questionnaire, an Excel spreadsheet, or an Adobe file
  - Respondent may complete the questionnaire either electronically (preferred) or on paper
  - Responses may be returned via e-mail as an attachment, by fax, or by mail

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## Survey Methods: Self-Administered (3)

### In-person – self-administered surveys

- Survey is handed out to a respondent or group of respondents and the completed survey is collected directly or returned by mail, fax, or drop box

### Methods not covered in this course:

- Data collection instrument (DCI) (i.e., form completed by GAO staff to record information gathered from observations, files or other documents)
- Semi-structured, exploratory interviews
- Focus groups (covered in ARM's Focus Groups course)

*Note: These and all other data collection methods are covered in the GAO Learning Center course - Data Collection Strategies.*

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## Survey Methods: Mixed-mode

### Mixed-mode Surveys

- Use more than one survey method for administering the same or similar questions
- May increase the likelihood of reaching respondent (e.g., mail following web if many e-mails are nonworking)
- May provide respondents with more than one way to answer (e.g., paper might be preferred over electronic by those who have to make physical observations or consult with others)
- May persuade nonrespondents to participate by offering a less burdensome request (e.g., a web survey followed by a shorter telephone interview for nonrespondents)

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## Basic Factors Involved in Decision

- Ten issues generally should be considered when deciding on the most appropriate survey method for your data requirements
- In addition, the strengths and weaknesses of each survey method for your particular data requirements generally should be factored in
- Therefore, the decision boils down to:

**Issues**  
 +  
**Strengths and Weaknesses**  
 =  
**An Appropriate Survey Method**

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## Survey Method Selection Issues (1)

<b>1. Time</b>	How much time do you have to develop the questionnaire and collect the data?
<b>2. Resources and costs</b>	What staffing and dollar resources are available to collect the data?
<b>3. Sensitivity of survey data</b>	How sensitive are the data you are collecting?
<b>4. Survey population characteristics</b>	What are the characteristics of your survey population and what kind of contact information do we have (e.g., access to the web, literacy level, quality of population list, etc.)?
<b>5. Survey population/ sample size</b>	What is your survey population or sample size?
<b>6. Survey formatting</b>	

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## Survey Method Selection Issues (2)

<b>7. Technical/ complex nature of the data being collected</b>	Does the survey require the respondent to do complex or time consuming analysis or computation tasks in order to answer the survey questions?
<b>8. Number and location of respondents for a single survey response</b>	Does the survey require that multiple respondents (possibly at different locations) answer specific questions or sections of a single survey?
<b>9. Complexity/ number of questionnaire skip patterns</b>	Does your survey require numerous or complex skip patterns or instructions?
<b>10. Requests to submit supplementary documentation</b>	Does your survey require respondents to include copies of documents that back up the survey responses?

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## Survey Methods: Strengths and Weaknesses

For the selection issues just described, each survey method has strengths and weaknesses.

These are detailed in Appendix 1 “Survey Method Selection Issues” starting on page A1-4.

**Top of page:** Type of survey method

**Left side of page:** Selection Issues

**Columns:** Survey method strengths and weaknesses for each selection issue



## Strengths and Weaknesses - Example

Face-to-face interview	
<b>Time/Resources are low</b>	<b>Strength</b> – If small number of interviews and close by <b>Weakness</b> – If large number of interviews/geographically dispersed
<b>Sensitivity of survey topic is high</b>	<b>Weakness</b> – If questions are sensitive, respondent may be reluctant to provide honest answers verbally to an interviewer.
<b>Respondents’ literacy levels are low</b>	<b>Strength</b> – Questions are read by interviewer/verbal or graphic assistance can be provided by interviewer
<b>Questionnaire contains complex skip patterns</b>	<b>Strength</b> – Interviewer trained to correctly follow skip patterns or skip patterns can be automatically programmed in a computer assisted format.
<b>Supplementary documentation is required</b>	<b>Strength</b> – Supplementary documentation or background material can be handed over at the time of the interview. <b>Weakness</b> – Supplementary documentation may not be ready at the time of the interview.

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## Strengths and Weaknesses – Class Participation

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Web Survey	
Time/Resources are low	
Sensitivity of survey topic is high	
Respondents' literacy levels are low	
Questionnaire contains complex skip patterns	
Supplementary documentation is required	

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## When do you decide on your survey method?

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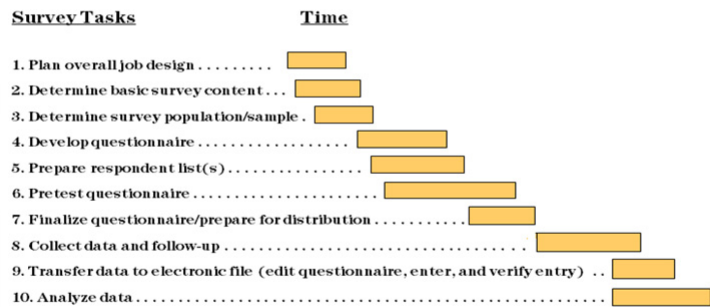
- Create basic design
  - Identify specific goals for survey
  - Define population & identify study sample
- Develop structured questionnaire
- Pretest and revise questionnaire
- Collect data
- Analyze data & report results

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## Survey Tasks Timeline



## Team Roles in Selecting Survey Method

### Teams should:

- Identify realistic engagement goals and develop basic survey questions that will achieve those goals
- Determine characteristics of survey respondents (e.g., computer skills, ability to access records, reading levels, etc.)
- Collect needed contact information (e.g., mailing addresses, e-mail addresses, telephone numbers)
- Take an active role in pretests or other survey development tasks (e.g., expert review)



## ARM Role in Selecting Survey Method

### ARM methodologists should:

- Share the latest knowledge about survey method choices
- Identify tradeoffs for various survey methods
- Provide collection options based on experience and currently available GAO support
- Assure that GAO survey guidance is followed (e.g., pretesting, confidentiality pledge (if any), internal peer review of surveys, etc.)
- Estimate level of effort needed to conduct survey and, if necessary, obtain additional ARM, Shared Services, and/or contractor support
- Draft and review statement of work for any contractor services

**Shared role/goal: Reach mutual decision on an appropriate survey method.**

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## Survey Method Selection Checklist

**The Survey Method Selection Checklist is Appendix 2 of the handout.**

### The function of the checklist is to:

- Provide a structured framework and guide the selection process
- Quickly eliminate inappropriate survey methods
- Provide documentation for the selection decision

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## Group Exercise and Discussion

### Class exercise –

- Divide into groups of 3-4 participants
- Each group will be assigned a scenario from Appendix 3. Each has details on the objectives, population characteristics, etc.
- Use the Survey Method Evaluation Checklist and Strength and Weakness of Methods materials from Appendix 1
- Take about 15 minutes to complete the checklist and decide on the most appropriate survey administration method(s)
- Write down the methods selected and the reasons behind your decision

**Class discussion** – Each group will report on their choices and reasons. The class and the instructor will then discuss the decision.

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## Question and Answer Session

What questions do you have about what we've covered today?

Do you have any questions about survey administration method issues we did not cover today?

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**Appendix 1****Survey Method Selection Issues**

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**List of Survey  
Methods****Interviewer Administered**

- Face-to-face
- Telephone

**Self-Administered**

- Web survey
- Mail survey
- Electronic surveys (e.g., MS Word Electronic Questionnaire, an Excel spreadsheet, or an Adobe PDF file)
- In-person, self-administered survey

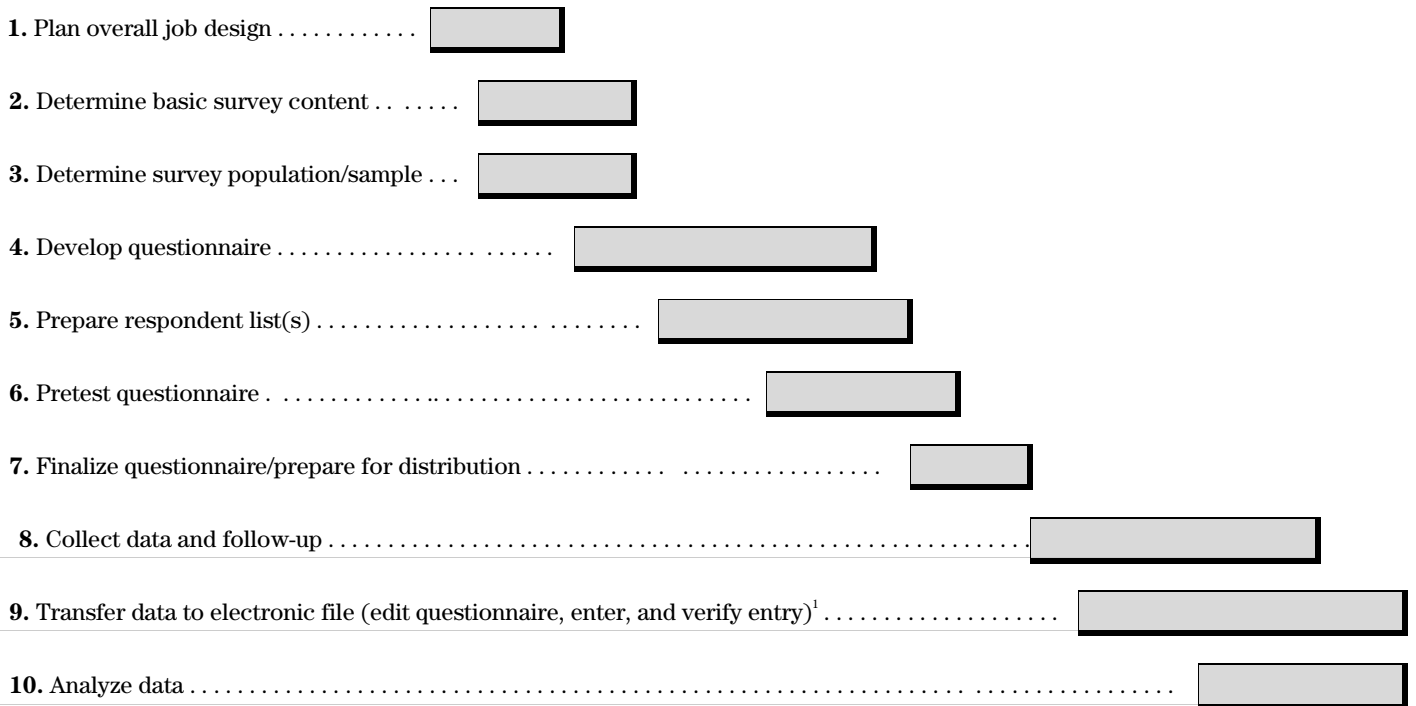
**Mixed-mode**

**Survey Tasks  
Timeline**

The chart below represents a typical timeline that applies in general to any mode of survey administration. Time periods in days, weeks, or months, are not presented because the time spans represented by the bars may vary greatly depending on numerous factors such as the length and complexity of the questionnaire, the population or sample size, the complexity of the sample design, the ease or difficulty of obtaining respondent addresses (physical or e-mail), etc. Many of the time periods spent on these tasks can overlap, thus reducing the overall time.

**Survey Tasks**

**Time**



<sup>1</sup> Note: Data entry is not necessary for Web surveys and most electronic questionnaires, but diagnostics and editing may be necessary.

## Issues to Consider when Selecting a Survey Method

<b>Issue</b>	
<b>1. Time</b>	How much time do you have to develop the questionnaire and collect the data?
<b>2. Resources and costs</b>	What staffing and dollar resources are available to collect the data?
<b>3. Sensitivity of survey data</b>	How sensitive are the data you are collecting?
<b>4. Survey population characteristics</b>	What are the characteristics of your survey population and what kind of contact information do we have (e.g., access to the web, literacy level, quality of population list, etc.)?
<b>5. Survey population/sample size</b>	What is your survey population or sample size?
<b>6. Survey formatting</b>	Does your survey require complex formatting features such as large matrices with complex instructions, graphical symbols, and answer spaces?
<b>7. Technical/complex nature of the data being collected</b>	Does the survey require the respondent to do complex or time consuming analysis or computation tasks in order to answer the survey questions?
<b>8. Number and location of respondents for a single survey response</b>	Does the survey require that multiple respondents (possibly at different locations) answer specific questions or sections of a single survey?
<b>9. Complexity/number of questionnaire skip patterns</b>	Does your survey require numerous or complex skip patterns or instructions?
<b>10. Requests to submit supplementary documentation</b>	Does your survey require respondents to include copies of documents that back up the survey responses?

## Strengths and Weaknesses of Survey Methods

<b>Face-to-face interviews</b>		
	<b>Strengths</b>	<b>Weaknesses</b>
<b>1. Time-related considerations</b>	<ul style="list-style-type: none"> <li>If small number in close proximity, can be completed relatively quickly.</li> <li>Interviews conducted by GAO staff may result in more complete responses requiring less followup and editing.</li> </ul>	<ul style="list-style-type: none"> <li>May require travel which adds to overall time</li> <li>May be difficult to set up times convenient to both respondent and interviewer</li> <li>May require interviewer training</li> </ul>
<b>2. Resource and cost-related considerations</b>	<ul style="list-style-type: none"> <li>If Computer Assisted Personal Interview (CAPI), no separate data entry costs</li> </ul>	<ul style="list-style-type: none"> <li>Requires assignment of interviewers which add both to cost and number of resources</li> <li>May require travel which adds to cost</li> <li>May require interviewer training which adds to cost</li> </ul>
<b>3. Sensitivity of survey</b> (e.g., sensitivity of topics, security of data transmission, etc.)	<ul style="list-style-type: none"> <li>Interviewer or organizational characteristics could serve to reduce response bias (e.g., same sex, race, age category, or interviewer representative of well-regarded organization, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Respondents may be reluctant to answer sensitive questions in front of an interviewer, or may select more socially acceptable responses than they otherwise would</li> </ul>
<b>4. Survey population characteristics</b> (e.g., literacy level, access to web, contact information, etc)	<ul style="list-style-type: none"> <li>In situations where respondent literacy level is low, allows for one-on-one interaction between interviewer and respondent, controlled clarification of questions, and other types of verbal or visual assistance by the interviewer</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
<b>5. Number of respondents in population or sample</b>	<ul style="list-style-type: none"> <li>If number is relatively small and is geographically co-located (e.g., 50 or less in one or two cities) allows for benefits of in-depth interviewing</li> </ul>	<ul style="list-style-type: none"> <li>If number is large and/or dispersed geographically (e.g., more than 50 in many locations), face-to-face interviewing may not be feasible from a time and resource perspective</li> </ul>
<b>6. Survey formatting issues</b> (e.g., restrictions due to web survey formatting constraints)	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<b>7. Technical/complex nature of survey responses</b> (e.g., survey responses may require complex calculations)	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>Interviewing time is limited. Time constraints would not allow for inclusion of complex or time-consuming items.</li> <li>Oral format of interview would not allow for conveying complex instructions, formulas, or other background information usually needed for these types of questions.</li> <li>Questions cannot be “passed along” to staff possessing specialized knowledge or skills needed to complete the complex or computational type items</li> <li>(Option could be to fax or e-mail these items to</li> </ul>

<b>Face-to-face interviews</b>		
	<b>Strengths</b>	<b>Weaknesses</b>
		the respondent ahead of the interview so that responses could be available at the time of the interview.)
<b>8. Number and/or location(s) of individual respondents providing input into a single survey response</b>	<ul style="list-style-type: none"> <li>See potential weaknesses - While these could be considered weaknesses in that they require more planning, time, and resources, they could also be considered strengths in that targeting questions based on respondent expertise may provide more valid data.</li> </ul>	<ul style="list-style-type: none"> <li>Would require separate interviews with various respondents possessing expertise in specific subject areas</li> <li>Determination of persons with required subject matter expertise would have to be made prior to scheduling interviews</li> <li>If group interview (i.e., interviewing multiple individuals at one time), could receive conflicting responses to various survey questions.</li> </ul>
<b>9. Complexity/Number of skip patterns contained in questionnaire</b>	<ul style="list-style-type: none"> <li>Interviewer is trained to complete interview including following all skip patterns correctly. In CAPI format, skip patterns can be programmed into the system eliminating interviewer error altogether.</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
<b>10. Request to submit paper or electronic copies of documentation or other background materials along with survey response</b>	<ul style="list-style-type: none"> <li>Background materials or documentation can be handed over at the time of the interview or arrangements can be made to mail or electronically send the documents soon after the interview has been completed. To aid compliance, a list of requested materials and a return envelope can be given to the respondent at the time of the interview.</li> </ul>	<ul style="list-style-type: none"> <li>If documentation is not provided at the time of the interview, there is no assurance that documents will be sent by the respondent at a later time.</li> </ul>

<b>Telephone interviews</b>		
	<b>Strengths</b>	<b>Weaknesses</b>
<b>1. Time-related considerations</b>	<ul style="list-style-type: none"> <li>• Does not require travel</li> <li>• Easier to set up times convenient to both respondent and interviewer</li> <li>• Interviews can be contracted out to firms that specialize in conducting interview surveys. (This can be arranged through an ARM staff member.)</li> <li>• Interviews conducted by GAO staff may result in more complete responses requiring less followup and editing.</li> </ul>	<ul style="list-style-type: none"> <li>• May require interviewer training</li> </ul>
<b>2. Resource and cost-related considerations</b>	<ul style="list-style-type: none"> <li>• Does not require travel, reducing cost</li> <li>• If Computer Assisted Telephone Interview (CATI), no separate data entry costs</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Requires assignment of interviewers which add both to cost and number of resources</li> <li>• May require interviewer training which may affect cost</li> <li>• If telephone interviews are conducted by contractors, could require long lead time and will require expenditure that must go through budgeting process</li> </ul>
<b>3. Sensitivity of survey</b> (e.g., sensitivity of topics, security of data transmission, etc.)	<ul style="list-style-type: none"> <li>• Non face-to-face nature of interview may serve to reduce interviewer bias</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of visual cues by the respondent (e.g., facial expression when answering question, etc.) could serve to question validity of responses provided</li> </ul>
<b>4. Survey population characteristics</b> (e.g., literacy level, access to web, contact information, etc.)	<ul style="list-style-type: none"> <li>• In situation where respondent literacy level is low, allows for one-on-one interaction between interviewer and respondent, controlled clarification of questions, and other types of verbal assistance</li> </ul>	<ul style="list-style-type: none"> <li>• Requires respondent access to telephone</li> </ul>
<b>5. Number of respondents in population or sample</b>	<ul style="list-style-type: none"> <li>• Allows for benefits of interviewing with a larger and geographically dispersed population or sample than would be possible using face-to-face interviews</li> </ul>	<ul style="list-style-type: none"> <li>• While not as time and resource intensive as face-to-face interviews, still more resource intensive than other data collection modes</li> </ul>
<b>6. Survey formatting issues</b> (e.g., restrictions due to web survey formatting constraints)	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>

<b>Telephone interviews</b>		
	<b>Strengths</b>	<b>Weaknesses</b>
<b>7. Technical/complex nature of survey responses</b> (e.g., survey responses may require complex calculations)	<ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• Interviewing time is limited. Time constraints would not allow for inclusion of complex or time-consuming items.</li> <li>• Oral format of interview would not allow for conveying complex instructions, formulas, or other background information usually needed for these types of questions.</li> <li>• Questions cannot be “passed along” to staff possessing specialized knowledge or skills needed to complete the complex or computational type items</li> <li>• (Option could be to fax or e-mail these items to the respondent ahead of the interview so that responses could be available at the time of the interview.)</li> </ul>
<b>8. Number and/or location(s) of individual respondents providing input into a single survey response</b>	<ul style="list-style-type: none"> <li>• See potential weaknesses - While these could be considered weaknesses in that they require more planning, time, and resources, they could also be considered strengths in that targeting questions based on respondent expertise may provide more valid data.</li> </ul>	<ul style="list-style-type: none"> <li>• Would require separate interviews with various respondents possessing expertise in specific subject areas</li> <li>• Determination of persons with required subject matter expertise would have to be made prior to scheduling interviews</li> <li>• If group interview (i.e., interviewing multiple individuals at one time), could receive conflicting responses to various survey questions.</li> </ul>
<b>9. Complexity/ Number of skip patterns contained in questionnaire</b>	<ul style="list-style-type: none"> <li>• Interviewer is trained to complete interview including following all skip patterns correctly. In Computer-Assisted Telephone Interview format, skip patterns can be programmed into the system eliminating interviewer error altogether.</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>
<b>10. Request to submit paper or electronic copies of documentation or other background materials along with survey response</b>	<ul style="list-style-type: none"> <li>• Arrangements can be made to mail or electronically send the documents and other materials soon after the interview has been completed.</li> </ul>	<ul style="list-style-type: none"> <li>• There is no assurance that documents will be sent by the respondent at a later time.</li> </ul>

<b>Web survey</b>		
	<b>Strengths</b>	<b>Weaknesses</b>
<b>1. Time-related considerations</b>	<ul style="list-style-type: none"> <li>• No mail system delays when e-mails are sent to respondents</li> <li>• There is no need for manual data entry by contractors in that respondents enter data directly to the Web-based questionnaire</li> <li>• Various administrative tools to support the survey project, e.g., respondent activity logs, on-line tabulation report in real-time, ability to view individual responses while survey is underway</li> </ul>	<ul style="list-style-type: none"> <li>• Could require additional time to develop and test survey</li> <li>• Obtaining list of e-mail addresses may be time consuming</li> <li>• Special features such as non-traditional formatting, pre-population of questions, division of survey for multiple respondents, etc. add time to the development process</li> </ul>
<b>2. Resource and cost-related considerations</b>	<ul style="list-style-type: none"> <li>• Allows for large numbers of surveys to be distributed via the web at very low cost</li> <li>• Does not require data entry</li> <li>• Data analysis programs are automatically written by web survey application</li> </ul>	<ul style="list-style-type: none"> <li>• Requires availability of ARM survey specialists and contractors to prepare survey for deployment</li> </ul>
<b>3. Sensitivity of survey</b> (e.g., sensitivity of topics, security of data transmission, etc.)	<ul style="list-style-type: none"> <li>• Web surveys can be used to collect “sensitive” data using the secure server. (Note: we offer the respondent details about our secure server and the Verisign® logo.)</li> <li>• Survey can be conducted anonymously, thus increasing validity of responses (Note: anonymous web surveys do not allow for targeted prompt e-mails, and should be used only in very limited cases)</li> <li>• Whether or not the survey is anonymous, respondents may prefer to provide an impersonal written response rather than to tell to an interviewer</li> </ul>	<ul style="list-style-type: none"> <li>• Despite our assurances, a few respondents (or organization surveyed) may be hesitant to send responses to sensitive questions via the Internet</li> <li>• If data are classified, conducting a QPL web survey would not be allowed</li> </ul>
<b>4. Survey population characteristics</b> (e.g., literacy level, access to web, contact information, etc.)	<ul style="list-style-type: none"> <li>• As long as respondent is computer literate, allows for easy completion of survey instrument</li> <li>• Allows respondent to answer open-ended questions easily and change portions of responses similar to using a word processor</li> <li>• Allows respondent to print out survey if desired</li> </ul>	<ul style="list-style-type: none"> <li>• Requires respondent access to computer</li> <li>• Requires respondent to have e-mail account and check e-mail on a regular basis</li> <li>• Requires computer skills to access and complete survey</li> </ul>
<b>5. Number of respondents in population or sample</b>	<ul style="list-style-type: none"> <li>• Allows for distribution of surveys to a large population or sample of respondents in a cost-effective and efficient manner</li> <li>• Tracking survey responses is quick and easy and is updated on a real-time basis</li> <li>• Sending out prompt e-mails or reminders to non-respondents is very easy and inexpensive</li> <li>• Reduces need for editing, coding, &amp; data entry (including open-ended responses) for large numbers of returned surveys</li> </ul>	<ul style="list-style-type: none"> <li>• Requires obtaining complete list of e-mail addresses for survey population or sample (Note: If complete e-mail list is not obtainable, a mixed-mode survey, that is, a survey using more than one method, is a possibility)</li> <li>• Requires follow-ups for bad e-mail addresses</li> </ul>



<b>Web survey</b>		
	<b>Strengths</b>	<b>Weaknesses</b>
<b>6. Survey formatting issues</b> (e.g., restrictions due to web survey formatting constraints)	<ul style="list-style-type: none"> <li>• GAO's Questionnaire Programming Language (QPL) allows for all basic question types (i.e., check one, check all that apply, number entries, date entries, short or long open-end questions, matrix questions, etc.)</li> <li>• QPL can be customized to include pop-up instructions, prepopulation from databases, and other customized formats</li> </ul>	<ul style="list-style-type: none"> <li>• While QPL formats can be customized, not all complex formats are doable</li> <li>• Customizing QPL adds time to survey development</li> <li>• Since on web surveys the respondent can view only one screen at a time, it may be difficult for the respondent to determine the overall size of the survey as well as to gain an understanding of the relationship of one section to another section</li> </ul>
<b>7. Technical/complex nature of survey responses</b> (e.g., survey responses may require complex calculations)	<ul style="list-style-type: none"> <li>• Technical or complex items may be included in a web survey in that the respondent has the ability to print the questionnaire (or sections), make the calculations, and enter the resulting responses. For totals, web-based questionnaires can calculate totals when component numbers are entered.</li> </ul>	<ul style="list-style-type: none"> <li>• This process is slightly more cumbersome in a web-based survey in that numbers must be written down on the printed version and then entered into the web-based version. While unlikely, transcription errors could occur.</li> </ul>
<b>8. Number and/or location(s) of individual respondents providing input into a single survey response</b>	<ul style="list-style-type: none"> <li>• Survey can be printed out (.PDF file) and can be distributed via hard copy or e-mail attachment to multiple "respondents" to complete their section(s).</li> <li>• Physical location of multiple respondents is not a factor as long as they have e-mail addresses.</li> </ul>	<ul style="list-style-type: none"> <li>• Primary respondent still needs to keep track of other respondents' progress in completing sections so that he/she can enter the responses into the actual web-based questionnaire and answer the final survey completion question.</li> <li>• Only one person can access the web survey account at one time</li> </ul>
<b>9. Complexity/Number of skip patterns contained in questionnaire</b>	<ul style="list-style-type: none"> <li>• In a web survey the respondent has the option of clicking on the skip instruction following the question response and being automatically transferred to the next question to be answered following the skip sequence. This may not eliminate but does reduce respondent errors.</li> </ul>	<ul style="list-style-type: none"> <li>• If the respondent in a web survey for some reason does not click on the skip instruction following the question response, he/she will not be transferred to the correct question in the skip sequence and may continue to answer inappropriate questions. However, this would be less likely to occur in a web-based survey than it would in other types of self-administered surveys.</li> </ul>
<b>10. Request to submit paper or electronic copies of documentation or other background materials along with survey response</b>	<ul style="list-style-type: none"> <li>• Can be done using a multi-mode approach. At the time the web survey goes out, a return envelope and a list of requested materials can be mailed to the respondent. The web survey can also make reference to and provide a listing of requested materials to be returned in the return envelope.</li> <li>• Web surveys can be programmed to allow for file uploads from respondents</li> </ul>	<ul style="list-style-type: none"> <li>• There is no assurance that requested documents will be sent by the respondent at the time he/she completed the web survey.</li> <li>• Obtaining copies of paper documents is more complicated and cumbersome than would be the case using other survey modes.</li> <li>• While large files can be uploaded in a web survey, there are some restrictions in the size of the file</li> </ul>

<b>Mail survey</b>		
<b>Strengths</b>		<b>Weaknesses</b>
<b>1. Time-related considerations</b>	<ul style="list-style-type: none"> <li>Allows for large numbers of surveys to be completed at one time</li> </ul>	<ul style="list-style-type: none"> <li>Obtaining mailing list/addresses may be time consuming</li> <li>Requires time in mail system to reach respondent and be returned to GAO</li> <li>Requires follow-up mailings with repeated mail system delays</li> <li>Requires editing, coding, data entry, etc.</li> </ul>
<b>2. Resource and cost-related considerations</b>	<ul style="list-style-type: none"> <li>Allows for large numbers of surveys to be distributed at relatively low cost</li> </ul>	<ul style="list-style-type: none"> <li>Must arrange for assembly of mailout materials</li> <li>Requires follow-up mailings</li> <li>Requires staff for data editing and coding</li> <li>Requires data entry by a contractor</li> </ul>
<b>3. Sensitivity of survey</b> (e.g., sensitivity of topics, security of data transmission, etc.)	<ul style="list-style-type: none"> <li>Survey can be conducted anonymously, thus increasing validity of responses</li> <li>Whether or not the survey is anonymous, respondents may prefer to provide an impersonal written response rather than to tell to an interviewer</li> </ul>	<ul style="list-style-type: none"> <li>Certain sensitive or national security information should not be sent using normal mail process (may require FedEx using special procedures)</li> <li>Surveys conducted anonymously do not allow for targeted nonresponse follow-up</li> </ul>
<b>4. Survey population characteristics</b> (e.g., literacy level, access to web, contact information, etc.)	<ul style="list-style-type: none"> <li>Does not require access to computer or fax equipment</li> <li>Does not require computer skills to complete survey</li> </ul>	<ul style="list-style-type: none"> <li>Requires respondent literacy level sufficient to understand and respond to written questions.</li> <li>Requires access to regular and timely mail service</li> </ul>
<b>5. Number of respondents in population or sample</b>	<ul style="list-style-type: none"> <li>Allows for distribution of surveys to a large population or sample of respondents in a relatively cost-effective and efficient manner compared with face-to-face interviews</li> </ul>	<ul style="list-style-type: none"> <li>Requires obtaining complete list of addresses for survey population or sample and editing the list for missing information or formatting problems</li> <li>Requires follow-ups for returns with address problems</li> <li>As population or sample size increases, the workload for editing, coding, and data entry also increases</li> </ul>
<b>6. Survey formatting issues</b> (e.g., restrictions due to web survey formatting constraints)	<ul style="list-style-type: none"> <li>Allows for varied and original format alternatives (e.g., double or triple columned response alternatives, visual aids such as arrows, instructions interlaced with questions, landscaped page orientation, etc.)</li> <li>Allows respondent to easily review entire survey instrument prior to answering questions</li> </ul>	<ul style="list-style-type: none"> <li>Overly complicated or visually crowded formatting may cause confusion on the part of the respondent and lead to incorrect answers or item nonresponse/survey nonresponse</li> <li>Overly complicated or visually crowded formatting may cause data entry errors</li> </ul>

<b>Mail survey</b>		
<b>Strengths</b>		<b>Weaknesses</b>
<b>7. Technical/complex nature of survey responses</b> (e.g., survey responses may require complex calculations)	<ul style="list-style-type: none"> <li>Allows for the inclusion of technical or complex items in that: 1) the respondent has ample time to complete the requested item(s); 2) the printed format allows for the inclusion of complex instructions, formulas, or other background information; and 3) survey instrument may be easily passed along to other staff who may possess specialized knowledge or skills needed to complete the complex or computational type items</li> </ul>	<ul style="list-style-type: none"> <li>If survey is passed around to different persons possessing knowledge to answer selected items, it is necessary for the primary respondent to keep track of the survey so it can be returned in a timely manner. This may or may not occur.</li> </ul>
<b>8. Number and/or location(s) of individual respondents providing input into a single survey response</b>	<ul style="list-style-type: none"> <li>If persons are in a single physical location, survey could easily be passed around to various respondents</li> </ul>	<ul style="list-style-type: none"> <li>If persons are not in a single physical location, would be difficult to pass survey around to various respondents</li> <li>If survey is passed around to different persons for completion of various sections (whether in one or various physical locations), it is necessary for the primary respondent to keep track of the survey so it can be returned in a timely manner. This may or may not occur.</li> </ul>
<b>9. Complexity/ Number of skip patterns contained in questionnaire</b>	<ul style="list-style-type: none"> <li>If survey instrument contains few skip patterns, and these skip patterns are fairly simple, this will not be an issue in a mail survey.</li> </ul>	<ul style="list-style-type: none"> <li>If survey instrument contains numerous or complex skip patterns, this may cause confusion among survey respondents and lead to errors in completing the survey.</li> <li>In a survey containing numerous or complex skip patterns, careful editing of incoming surveys will be necessary in order to ensure that skip patterns were followed.</li> </ul>
<b>10. Request to submit paper or electronic copies of documentation or other background materials along with survey response</b>	<ul style="list-style-type: none"> <li>Background materials or documentation requests can be included as part of the survey instrument or another document sent along with the survey instrument can list requested materials.</li> </ul>	<ul style="list-style-type: none"> <li>There is no assurance that requested documents will be sent by the respondent at the time he/she returns the survey.</li> </ul>

<b>Electronic surveys</b>		
	<b>Strengths</b>	<b>Weaknesses</b>
<b>1. Time-related considerations</b>	<ul style="list-style-type: none"> <li>No mail system delays once e-mails are sent to respondents</li> </ul>	<ul style="list-style-type: none"> <li>Obtaining list of e-mail addresses may be time consuming</li> <li>May require editing, coding, data entry, etc.</li> </ul>
<b>2. Resource and cost-related considerations</b>	<ul style="list-style-type: none"> <li>Allows for moderate numbers of surveys to be distributed via e-mail at very low cost</li> </ul>	<ul style="list-style-type: none"> <li>Requires computers/fax equipment to receive completed surveys</li> <li>If surveys contain prepopulated information unique to each respondent, additional time is needed to prepopulate and format the surveys</li> <li>Requires staff for editing and coding</li> <li>Requires staff to collect and process individual questionnaires from fax machines or computers</li> <li>Unless data are individually processed electronically, requires data entry by a contractor</li> </ul>
<b>3. Sensitivity of survey</b> (e.g., sensitivity of topics, security of data transmission, etc.)	<ul style="list-style-type: none"> <li>Survey can be conducted anonymously if survey is printed out by the respondent, completed in writing, and sent back by mail without a return address</li> <li>Whether or not the survey is anonymous, respondents may prefer to provide an impersonal written response rather than to tell to an interviewer</li> </ul>	<ul style="list-style-type: none"> <li>Respondent (or organization surveyed) may be hesitant to enter responses on non-secure computer or send responses via e-mail</li> <li>If data are classified, proprietary, or designated "sensitive", sending it via unsecured e-mail would not be allowed</li> </ul>
<b>4. Survey population characteristics</b> (e.g., literacy level, access to web, contact information, etc)	<ul style="list-style-type: none"> <li>As long as respondent is computer literate, allows for easy completion of survey instrument</li> <li>Allows respondent to answer open-ended questions easily and change portions of responses similar to using a word processor</li> <li>Allows respondent to print out survey if desired</li> </ul>	<ul style="list-style-type: none"> <li>Requires respondent access to computer</li> <li>Respondent's computer must have the same software package (e.g., MS Word, Excel, etc.) that GAO used to create the document</li> <li>Requires respondent to have e-mail account and check e-mail on a regular basis</li> <li>Requires computer skills to access and complete survey</li> <li>Unless the questionnaire is sent in MS Word in a locked format, the respondent may alter question wording or questionnaire format</li> </ul>
<b>5. Number of respondents in population or sample</b>	<ul style="list-style-type: none"> <li>Good if number of respondents is relatively small (e.g., 50 or less)</li> </ul>	<ul style="list-style-type: none"> <li>Requires obtaining complete list of e-mail addresses for population or sample</li> <li>Requires follow-ups for bad e-mail addresses</li> <li>Must track returned surveys</li> </ul>

<b>Electronic surveys</b>		
	<b>Strengths</b>	<b>Weaknesses</b>
<b>6. Survey formatting issues (e.g., restrictions due to web survey formatting constraints)</b>	<ul style="list-style-type: none"> <li>Allows for varied and original format alternatives (e.g., double or triple columned response alternatives, visual aids such as arrows, instructions interlaced with questions, landscaped page orientation, etc.).</li> <li>Allows respondent to easily review entire survey instrument prior to answering questions</li> </ul>	<ul style="list-style-type: none"> <li>Overly complicated or visually crowded formatting may cause confusion on the part of the respondent and lead to incorrect answers or item nonresponse/survey nonresponse.</li> <li>Overly complicated or visually crowded formatting may cause data entry errors.</li> <li>Long text input by respondents may cause subsequent questions and answers to shift so that questions and answers do not appear on the same page.</li> <li>Cannot prevent respondent from answering multiple choice questions as if they were check-all-that apply questions</li> </ul>
<b>7. Technical/complex nature of survey responses (e.g., survey responses may require complex calculations)</b>	<ul style="list-style-type: none"> <li>Allows for the inclusion of technical or complex items in that: 1) the respondent has ample time to complete the requested item(s); 2) the printed format allows for the inclusion of complex instructions, formulas, or other background information; and 3) survey instrument may be easily passed along to other staff who may possess specialized knowledge or skills needed to complete the complex or computational type items.</li> </ul>	<ul style="list-style-type: none"> <li>If survey is passed around to different persons possessing knowledge to answer selected items, it is necessary for the primary respondent to keep track of the survey so it can be returned in a timely manner. This may or may not occur.</li> </ul>
<b>8. Number and/or location(s) of individual respondents providing input into a single survey response</b>	<ul style="list-style-type: none"> <li>Compared to a mail or fax survey, may be easier to forward survey along with instructions on which section to complete to respondents at various physical locations.</li> </ul>	<ul style="list-style-type: none"> <li>If survey is e-mailed to different persons for completion of various sections (whether in one or various physical locations), it is necessary for the primary respondent to keep track of the survey so it can be returned in a timely manner. This may or may not occur.</li> </ul>
<b>9. Complexity/ Number of skip patterns contained in questionnaire</b>	<ul style="list-style-type: none"> <li>If survey instrument contains few skip patterns, and these skip patterns are fairly simple, this will not be an issue in an electronic questionnaire.</li> </ul>	<ul style="list-style-type: none"> <li>If survey instrument contains numerous or complex skip patterns, this may cause confusion among survey respondents and lead to errors in completing the survey.</li> <li>In a survey containing numerous or complex skip patterns, careful editing of incoming surveys will be necessary in order to ensure that skip patterns were followed.</li> </ul>
<b>10. Request to submit paper or electronic copies of documentation or other background materials along with survey response</b>	<ul style="list-style-type: none"> <li>Background materials or documentation requests can be included as part of the survey instrument. Alternatively, another document e-mailed along with the survey instrument can list requested materials.</li> </ul>	<ul style="list-style-type: none"> <li>There is no assurance that requested documents will be sent by the respondent at the time he/she returns the survey.</li> </ul>

<b>In-Person, self-administered survey</b>		
	<b>Strengths</b>	<b>Weaknesses</b>
<b>1. Time-related considerations</b>	<ul style="list-style-type: none"> <li>Allows for larger numbers of surveys to be completed at one time, if administered in a group setting</li> <li>Surveys administered in-person by GAO staff may result in more complete responses, requiring less followup and editing.</li> </ul>	<ul style="list-style-type: none"> <li>May be difficult to set up times convenient to both respondents and GAO staff administering questionnaire.</li> <li>May require training of GAO staff administering questionnaires.</li> </ul>
<b>2. Resource and cost-related considerations</b>	<ul style="list-style-type: none"> <li>In a group setting, minimizes travel while still enabling some face-to-face advantages.</li> </ul>	<ul style="list-style-type: none"> <li>May require travel which adds to cost.</li> <li>May require training which adds to cost.</li> <li>Unlikely to be CAPI, and paper questionnaires incur data entry costs.</li> </ul>
<b>3. Sensitivity of survey</b> (e.g., sensitivity of topics, security of data transmission, etc.)	<ul style="list-style-type: none"> <li>Survey could be conducted anonymously if in group setting and respondent seals and submits response in a “drop box”</li> <li>Whether or not the survey is anonymous, respondents may prefer to provide an impersonal written response rather than tell an interviewer.</li> </ul>	<ul style="list-style-type: none"> <li>Response bias could be introduced due to the presence of GAO staff administering survey, other respondents, or third parties (e.g., conference sponsors).</li> <li>Surveys conducted anonymously do not allow for follow-up.</li> </ul>
<b>4. Survey population characteristics</b> (e.g., literacy level, access to web, contact information, etc.)	<ul style="list-style-type: none"> <li>If respondent literacy level is low, allows for <u>some</u> interaction between administrator and respondent(s).</li> </ul>	<ul style="list-style-type: none"> <li>Requires respondent literacy level sufficient to understand and respond to written questions, even with administrator assistance.</li> </ul>
<b>5. Number of respondents in population or sample</b>	<ul style="list-style-type: none"> <li>May allow for a larger sample than face-to-face and telephone interviewing, due to slightly faster data collection through self-administration, especially in a group setting.</li> </ul>	<ul style="list-style-type: none"> <li>If number is large and/or dispersed geographically, may not be feasible</li> <li>May be as time and resource intensive as face-to-face interviews, and more so than telephone interviewing.</li> </ul>
<b>6. Survey formatting issues</b> (e.g., restrictions due to web survey formatting constraints)	<ul style="list-style-type: none"> <li>Allows for varied and original format alternatives (e.g. double or triple columned response alternatives, visual aids such as arrows, instructions interlaced with questions, landscaped page orientation, etc.).</li> <li>Allows respondent to easily review entire survey instrument prior to answering questions.</li> </ul>	<ul style="list-style-type: none"> <li>Overly complicated or visually crowded formatting may cause confusion on the part of the respondent and lead to incorrect answers or item nonresponse/survey nonresponse, although presence of administrator may mitigate some of these problems.</li> </ul>

<b>In-Person, self-administered survey</b>		
	<b>Strengths</b>	<b>Weaknesses</b>
<b>7. Technical/complex nature of survey</b> responses (e.g., survey responses may require complex calculations)	<ul style="list-style-type: none"> <li>Some of the benefits of the self-administered modes (e.g., technical or complex items) may be present, but weaknesses of the limited-time interview format still prevail.</li> </ul>	<ul style="list-style-type: none"> <li>Survey time is limited. Time constraints would not allow for inclusion of complex or time-consuming items.</li> <li>In-person, self-administered survey might not allow for conveying complex instructions, formulas, or other background information.</li> <li>Questions cannot be “passed along” to staff possessing specialized knowledge or skills needed to complete the complex or computational type items.</li> </ul>
<b>8. Number and/or location(s) of individual respondents providing input into a single survey response</b>	<ul style="list-style-type: none"> <li>See potential weaknesses – While these could be considered weaknesses in that they require more planning, time, and resources, they could also be considered strengths in that targeting questions based on respondent expertise may provide more valid data.</li> </ul>	<ul style="list-style-type: none"> <li>Would require separate interviews with various respondents possessing expertise in specific subject areas.</li> <li>Determination of persons with required subject matter expertise would have to be made prior to scheduling interviews.</li> <li>If surveying a group from same entity (i.e., interviewing multiple individuals at one time), could receive conflicting responses to various survey questions.</li> </ul>
<b>9. Complexity/ Number of skip patterns contained in questionnaire</b>	<ul style="list-style-type: none"> <li>If survey instrument contains few skip patterns, and these skips are fairly simple, this will not be an issue in a mail survey.</li> </ul>	<ul style="list-style-type: none"> <li>If survey instrument contains numerous or complex skip patterns, this may cause confusion among survey respondents and lead to errors in completing the survey although this may be mitigated by presence of a GAO administrator.</li> <li>If a survey containing numerous or complex skip patterns, careful editing of incoming surveys will be necessary in order to ensure that skip patterns were followed.</li> </ul>
<b>10. Request to submit paper or electronic copies of documentation or other background materials along with survey response</b>	<ul style="list-style-type: none"> <li>Background materials or documents can be handed over at the time of the interview or arrangements can be made to mail or electronically send the documents. To aid compliance, a list of requested materials and a return envelope/e-mail address can be given to the respondent at the time of the survey administration.</li> </ul>	<ul style="list-style-type: none"> <li>There is no assurance that survey will be mailed/e-mailed by the respondent at a later time.</li> </ul>

<b>Mixed-mode survey</b>		
	<b>Strengths</b>	<b>Weaknesses</b>
<b>1. Time-related considerations</b>	<ul style="list-style-type: none"> <li>• May shorten fieldwork by increasing contacts and thus allowing the survey request to reach respondents faster</li> </ul>	<ul style="list-style-type: none"> <li>• More planning and administrative work required to incorporate multiple modes</li> <li>• A risk of duplicate questionnaire returns if the survey requests are more likely to be mistaken for separate, independent surveys because they are in different modes</li> </ul>
<b>2. Resource and cost-related considerations</b>	<ul style="list-style-type: none"> <li>• May allow more efficient application of modes – using cheaper ones first and reserving more expensive methods for selective followup</li> </ul>	<ul style="list-style-type: none"> <li>• More planning and administrative work required to incorporate multiple modes</li> </ul>
<b>3. Sensitivity of survey</b> (e.g., sensitivity of topics, security of data transmission, etc.)	<ul style="list-style-type: none"> <li>• If multiple modes are presented as options respondents can choose from, respondents with different levels of sensitivity may tailor their choice of mode to meet those concerns, and give more valid answers.</li> </ul>	<ul style="list-style-type: none"> <li>• May introduce mode effects to the extent that the presentation of the questions vary by mode in a way that will impact a respondent's answer</li> </ul>
<b>4. Survey population characteristics</b> (e.g., literacy level, access to web, contact information, etc.)	<ul style="list-style-type: none"> <li>• If type of contact information available (e.g., email address, phone number) varies across contact list, may reduce noncontact by allowing the survey request to reach more of the sample</li> <li>• May allow more appropriate application of modes, tailored to respondents' other characteristics (literacy, facility with computers, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>
<b>5. Number of respondents in population or sample</b>	<ul style="list-style-type: none"> <li>• In a large sample, may reach more respondents</li> <li>• In a small sample, may materially increase response rate by contacting even a few respondents through alternate modes</li> </ul>	<ul style="list-style-type: none"> <li>• In a large sample, if only a small number require alternate modes, response rate benefit may be minimal</li> <li>• In a small sample, the cost per case of the mixed mode option may be high</li> </ul>
<b>6. Survey formatting issues</b> (e.g., restrictions due to web survey formatting constraints)	<ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• May introduce mode effects to the extent that the presentation of the questions vary by mode in a way that will impact a respondent's answer</li> </ul>
<b>7. Technical/ complex nature of survey responses</b> (e.g., survey responses may require complex calculations)	<ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• May introduce mode effects to the extent that the presentation of the questions vary by mode in a way that will impact a respondent's answer</li> </ul>
<b>8. Number and/or location(s) of individual respondents providing input into a single survey response</b>	<ul style="list-style-type: none"> <li>• May allow more appropriate application of modes, tailored to number and location of respondents for each sampled case, if known from contact list</li> </ul>	<ul style="list-style-type: none"> <li>• Already elevated risk of duplicate questionnaire returns from multiple respondents in one sampled case may be increased if the requests are more likely to be mistaken for separate, independent surveys because they are in different modes</li> </ul>



<b>Mixed-mode survey</b>		
	<b>Strengths</b>	<b>Weaknesses</b>
<b>9. Complexity/ Number of skip patterns contained in questionnaire</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• May introduce mode effects to the extent that the presentation of the questions vary by mode in a way that will impact a respondent's answer</li> </ul>
<b>10. Request to submit paper or electronic copies of documentation or other background materials along with survey response</b>	<ul style="list-style-type: none"> <li>• May allow more appropriate application of modes, tailored to expected volume of documentation, if known from contact list</li> </ul>	<ul style="list-style-type: none"> <li>• May introduce mode effects to the extent that the presentation of the questions vary by mode in a way that will impact a respondent's answer</li> </ul>

**Reference Materials**

1. Guidance, tools, and resources covering all phases of GAO surveys can be found on the GAOweb at:

<http://intranet.gao.gov/arm>

Once there, click on the guidance link to “Surveys and Interviews”. You will find material related to methods of survey administration such as:

- [Conducting Questionnaire Surveys](#)
- [Questionnaire Pretest Procedures](#)
- [Structured Interviewing Guidance for Interviewers](#)
- [Good Practices Guide for Web Questionnaires](#)
- [Guides to Estimating Duration and Personnel Needs](#)
- [Using the Right Staff at the Right Time for Surveys](#)

2. GAO products reporting on surveys administered using various methods:

a) Face-to-Face Interviews

- GAO-11-198: GAO staff intercepted a sample of 302 truck drivers at four truck stops and conducted interviews on waiting times at shipping facilities.
- GAO-09-8: Checking account holders were identified in Random Digit Dialing (RDD) phone calls made by a contractor, and recruited for 108 in-person interviews by GAO staff at one of three GAO field offices.
- GAO-05-518: 308 visitors to the National Mall in Washington DC were systematically intercepted and interviewed using a paper and pencil questionnaire.

b) Telephone Interviews

- GAO-10-34, GAO-10-35SP: Contractors using a Computer Assisted Telephone Interviewing (CATI) system completed a total of 1,143 RDD interviews with a representative sample of adults in the US on their satisfaction with cell phone service.

- GAO-09-386: To learn about donations made to the National Park Service, GAO staff used a web-based structured instrument (CAPI – Computer Assisted Personal Interviewing) to interview officials at 9 National Parks in-person, and 16 by phone.
- GAO-11-26: Executives at 22 private employers hiring H1-B Visa holders were administered a web-based structured interview by phone.

### c) Web Surveys

- GAO-12-325, GAO-12-550SP: Sponsors of 401K retirement plans were given links to a QPL Web survey. 1,000 plans were initially sampled, with a contractor performing advance telephone calls to obtain contact information and followup calls to facilitate participation among nonrespondents. Administrative data from Department of Labor records was also matched to survey response data.
- GAO-12-65, GAO-12-91SP: five parallel web surveys were administered to agencies in 50 states responsible for regulating funeral homes, cemeteries, crematories, pre-need funeral plans, and sellers of funeral goods. Results were compared to similar surveys conducted in 2003.
- GAO-11-77, GAO-11-78SP: GAO surveyed 52 State DOTs and 569 Regional Planning and Development Organizations with Web questionnaires on state-level surface transportation planning activities and whether they considered rural needs.
- GAO-10-279, GAO-10-280SP: A link to a Web survey was emailed to a sample of 437 FDA managers on their perceptions of results-oriented management, and performance and management challenges and priorities at FDA. The questionnaire was based on four surveys administered in previous years.

### d) Mail Surveys

- GAO-10-937: Administrators at a stratified sample of 178 higher education institutions receiving DOD research funds were mailed paper questionnaires about their research facilities and administration cost rates. Each school was also asked for award and reimbursement data on one DOD research award.
- GAO-09-521: 1,732 local governments primarily responsible for collecting real-estate taxes due on residential properties were

sent paper questionnaires on issues related to tax deductions . The Governments Division of the Census Bureau provided the sampling frame.

- GAO-06-450, GAO-06-452SP: A questionnaire on election practices was mailed to 788 local election jurisdictions.

#### e) Electronic Surveys

- GAO-11-427, GAO-10-333: Employers in American Samoa and the Mariana Islands were emailed MS Word questionnaires to collect wage data on their employees, and to measure impacts of minimum wage increases. Employers returned completed forms by mail, fax and e-mail. Similar surveys were conducted one year apart and reported on separately.
- GAO-11-802: Officials at 11 Federal agencies participating in the creation or implementation of the Chesapeake Bay Protection and Restoration Strategy were emailed questionnaires in Excel spreadsheet form, asking them about coordination for and challenges to achieving Strategy goals.
- GAO-12-79: Federal officials at 11 agencies completed 94 MS Word questionnaires, each one pre-populated with information on one agency initiative that fostered green building in the nonfederal sector. Respondents were later contacted for followup discussions on the initiatives they reported on.
- GAO-10-812SP: To evaluate actions that could increase work participation for adults with disabilities, GAO conducted a two-round Delphi Survey of 60 experts using emailed MS Word questionnaires. The first Word form asked about the strengths and weaknesses of different approaches to employing the disabled, and the second solicited ratings of policy options distilled from a content analysis of responses to the first. Survey participants were later recruited for a GAO forum. This survey and forum methodology was repeated several months later to meet a related objective, in GAO-11-81SP.

#### f) In-person, self-administered Surveys

- GAO-11-329: To help elicit additional information from 11 experts in rural housing programs recruited by the National Academies, GAO administered a questionnaire to these experts to collect their responses on factors that most influence demand for housing units and funding. These experts also participated in a moderated discussion that day.

- GAO-10-644: To obtain the opinions of teachers and school principals on the usefulness of Education's What Works Clearinghouse, GAO administered a short questionnaire to a nongeneralizable sample of about 600 teachers and school principals at several conferences. At each of these conferences, conference organizers agreed to have GAO have a table either inside the exhibit hall or just outside it.

#### g) Mixed-Mode Surveys

- GAO-12-329: To learn about their workplace safety incentive programs, 1,000 manufacturing establishments were mailed paper questionnaires with a link to a simultaneously deployed web version of the questionnaire. Respondents could mail, fax or enter their responses online. Followup phone calls were also made to nonrespondents in this nationally representative sample of manufacturers.
- GAO-11-624: GAO conducted a simultaneous mail- and web-based mixed mode survey of a nationally representative sample of 2,642 primary care and specialty physicians who serve children. A contractor made advance phone calls to the sample to obtain mail and/or e-mail contact information, and also conducted abbreviated telephone followup interviews to nonresponding physicians.
- GAO-11-89: In a survey of a probability sample of 640 charter school principals, a Web questionnaire was the primary method of administration. To increase the response rate of the survey to the final 78%, a contractor administered a Computer Assisted Telephone Interview questionnaire, asking a subset of key questions from the Web questionnaire. The phone survey phase was sequential, beginning towards the end of Web survey fieldwork, to interview those who had not yet answered the Web survey.



## Appendix 2 Survey Method Evaluation Checklist

<p><b>Instructions:</b></p>	<p>1. Enter an “X” in the white boxes whenever the answer to the question is “Yes.” “Yes” indicates that the survey method is a weak option. Do not mark a box if you are unsure.</p> <p>2. Line through any column that has one or more Xs in the white boxes to exclude that method.</p> <p>3. Determine how many columns (i.e., methods) have not been excluded.          If only one column remains → That method is the most feasible barring any other circumstances.          If 2 or more columns remain → Continue with the “Secondary Logistical” table on the next page.</p>							
<p><b>Primary Logistical</b></p>	<p>Face-to-face interview (Paper or CAPI) conducted by GAO staff</p>	<p>Telephone interview (Paper or CATI) conducted by GAO staff</p>	<p>Telephone interview (CATI) conducted by contractors</p>	<p>Web</p>	<p>Mail</p>	<p>Electronic questionnaire (MS Word, Excel, etc.) returned via e-mail or fax</p>	<p>In-person, self-administered</p>	<p>Notes:</p>
<p>Does the population have difficulty using computers?</p>				<p>[ ]</p>		<p>[ ]</p>		
<p>Does the population lack internet access or experience problems such as frequent internet service interruptions?</p>				<p>[ ]</p>		<p>[ ]</p>		
<p>Are e-mail addresses unobtainable?</p>				<p>[ ]</p>		<p>[ ]</p>		
<p>Is the information being collected classified national security information?</p>			<p>[ ]</p>	<p>[ ]</p>				
<p>Is uninterrupted access to a phone difficult for this population?</p>		<p>[ ]</p>	<p>[ ]</p>					
<p>Are visual aids necessary for respondents to answer questions?</p>		<p>[ ]</p>	<p>[ ]</p>					
<p>Is access to regular mail service difficult for this population?</p>					<p>[ ]</p>			
<p>Is the reading comprehension of this population low?</p>				<p>[ ]</p>	<p>[ ]</p>	<p>[ ]</p>	<p>[ ]</p>	
<p>Will a large number of people (over 100) need to be contacted?</p>	<p>[ ]</p>	<p>[ ]</p>				<p>[ ]</p>		
<p>Is the time to get the fieldwork completed very limited?</p>	<p>[ ]</p>				<p>[ ]</p>		<p>[ ]</p>	

## Appendix 2 Survey Method Evaluation Checklist

<p><b>Instructions:</b></p>	<p>1. Line through the columns already deleted in “Primarily Logistical” above.                  2. Enter an “X” in the white boxes whenever the answer to the question is “Yes.” “Yes” indicates that the survey method is a weak option. Do not mark a box if you are unsure.                  3. In the total line below, total the number of Xs in WHITE boxes in each column.                  4. The survey method with the <b>smallest</b> number of Xs has the most advantages (i.e., is the best method).</p>							
<p><b>Secondary Logistical</b></p>	<p>Face-to-face (Paper or CAPI) Conducted by GAO staff</p>	<p>Telephone (Paper or CATI) Conducted by GAO staff</p>	<p>Telephone interview (CATI) conducted by contractors</p>	<p>Web</p>	<p>Mail</p>	<p>Electronic questionnaire (MS Word, Excel, etc.) returned via e-mail or fax</p>	<p>In-person, self- administered</p>	<p>Notes:</p>
<p>Are staff resources for conducting interviews limited?</p>	<p>[   ]</p>	<p>[   ]</p>					<p>[   ]</p>	
<p>Is staff time limited for tasks such as editing and coding?</p>	<p>[   ]</p>	<p>[   ]</p>			<p>[   ]</p>	<p>[   ]</p>	<p>[   ]</p>	
<p>Are engagement staff members not available to support a help desk to deal with technical questions involving the web-survey?</p>				<p>[   ]</p>				
<p>Do respondents have to go to more than one location to collect information to answer the questions or does the survey require more than one person to answer questions?</p>	<p>[   ]</p>	<p>[   ]</p>	<p>[   ]</p>	<p>[   ]</p>			<p>[   ]</p>	
<p>Will the person answering the questions need time to calculate or research the responses?</p>	<p>[   ]</p>	<p>[   ]</p>	<p>[   ]</p>				<p>[   ]</p>	
<p>Are there complex, unfamiliar terms or definitions that the respondent may need to refer back to while answering?</p>		<p>[   ]</p>	<p>[   ]</p>					
<p>Do you need to control the order in which respondents see the questions?</p>				<p>[   ]</p>	<p>[   ]</p>	<p>[   ]</p>	<p>[   ]</p>	
<p>Are respondents frequently asked to skip questions (e.g., skip to question 5)?</p>					<p>[   ]</p>	<p>[   ]</p>	<p>[   ]</p>	
<p>Are respondents asked to skip on the basis of more than one response (e.g., If you answered all of these items “No” then skip to qst. 12, otherwise continue with qst. 7)?</p>				<p>[   ]</p>	<p>[   ]</p>	<p>[   ]</p>	<p>[   ]</p>	
<p><b>Total</b></p>								



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**Appendix 3****Scenarios For Participants**

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**Scenario 1**

GAO was mandated by Congress to examine the \$70.3 billion that the American Recovery and Reinvestment Act of 2009 (Recovery Act) provided for three education programs—the State Fiscal Stabilization Fund (SFSF); Title I, Part A of the Elementary and Secondary Education Act (Title I); and Individuals with Disabilities Education Act (IDEA), Part B. We were asked to determine: (1) how selected states and local recipients used the funds; (2) what plans the Department of Education and selected states have to assess the impact of the funds; (3) what approaches are being used to ensure accountability of the funds; and (4) how Education and states ensure the accuracy of recipient reported data.

Here are some facts to consider when deciding on the survey administration method:

- The team has been asked to report to Congress in twelve months.
- Four team members are assigned to this job.
- The respondents would be superintendents of local educational agencies (LEAs) otherwise known as school districts. The team has selected a stratified random sample of 688 LEAs from the population of 15,994 LEAs included in our sample frame of data obtained from Education’s Common Core of Data (CCD).
- We have a list of LEAs that include mailing address and telephone number. Contractors can be used to call LEAs for contact information such as the name of the district superintendent and e-mail address.
- Virtually all superintendents have computers with internet connections.
- The final version of the survey is twenty-five pages long.

**Scenario 2**

Various federal programs promote the adoption of electronic health records (EHR) by hospitals and medical professionals. Some programs provide financial incentives to providers who adopt eligible forms of EHR technology to maintain patient health records. GAO has been asked to assess the impact of proposed increases to the annual limits on incentives that some providers could receive. Our objectives are to determine: (1) For office-based primary care providers in geographic areas designated as health professional shortage areas, what is the nature and extent of current EHR usage, (2) among the subset of targeted primary care providers not currently using eligible EHRs, what is the volume of Medicare Part B or Advantage patient activity (which figures in the formula determining incentive payments), and (3) after informing the sampled subset of what their current and proposed incentive payments would be, what is the potential likelihood of EHR adoption?

Here are some facts to consider when deciding on the survey administration method:

- The team has been asked to report in 12 months.
- Four team members are assigned to this job, but a variety of other data collection and analysis activities are planned for this job.
- Respondents at sampled medical practices would be either a physician or office manager. Some practices may have multiple office locations, and preferred respondents may be physically present at some locations but not others.
- The sample frame will be constructed from the AMA's Physician Masterfile database, which allows identification of practices by geography and primary/specialty type, but cannot definitively determine the eligibility of the provider for the survey without contacting the provider. The Masterfile has comprehensive and accurate mailing addresses and telephone numbers, and to a lesser extent, email addresses.
- Given expected response rates, an initial sample of approximately 700 practices will be needed to meet analysis needs.
- The questionnaire, which will require approximately 20 minutes to complete in most situations, has a variety of factual (patient volume and financial) and opinion (likelihood, preference) questions.

### Scenario 3

Congress enacted a law incrementally raising the minimum wages in two U.S. territories—American Samoa and the Commonwealth of the Northern Mariana Islands (CNMI). The law applies the first \$.50 per hour increase in the first year and mandates additional increases in each subsequent year until the minimum wages reach the level of the U.S. minimum wage. Congress also mandated that GAO report annually on the economic impact of the minimum wage increases in American Samoa and the CNMI, including its effects on wages, inflation-adjusted earnings, and employment levels. Nationally representative business surveys conducted by the Department of Labor and the Census Bureau only collect this information for the 50 states, Puerto Rico, and the Virgin Islands. Therefore, the team determined that it would need to collect this information in its own survey. The team also plans to ask questions related to how planned future wage increases will affect business decisions related to operating capacity, hiring, and benefits.

Here are some facts to consider when decided on the survey administration method:

- The mandated report is due in 12 months.
- Five team members are assigned to this job from two different mission teams and are planning two-week site visits in each territory.
- Respondents will be the largest employers in each territory (defined as those employing more than 50 workers) and include private businesses, government agencies, and nonprofit organizations. Some employers are large multinational corporations with headquarters off-island (in the U.S. mainland, Europe, or Asia), while other employers are local “mom-and-pop” businesses. There were 40 businesses selected in American Samoa and 63 businesses in the CNMI.
- The list of the largest employers in each territory was determined from several administrative sources, including local tax records and immigration databases. Contact information for each employer was not provided in the administrative records. The team’s intern can make advanced phone calls and ask for appropriate contact information.
- In American Samoa, there is one central post office that serves all surrounding islands and it is not uncommon for residents to only check their mail once every couple of months. Internet access in the territories may be unreliable and some businesses do not have access at all.
- Some of the information collected in the survey is considered proprietary and must be protected from public release.

- For most businesses, respondents from multiple departments will need to provide data for the survey and must access this information from databases or other records. Because of the large volume of data requested in the survey, it is expected that it will take several hours to complete. Some businesses may prefer to submit spreadsheets or other data extracts rather than fill out the GAO questionnaire.
- The survey includes some complex formatting. It may need to be distributed to several different departments in order to respond.

## Scenario 4

The GAO has been asked by a Congressional committee to evaluate the procedures involved in testing military weaponry. We have been asked to identify: 1) Quality of the current testing program, and 2) Compliance with established weapons testing procedures.

Here are some facts to consider when deciding on the survey administration method:

- The team has been asked to deliver a report in 6 months.
- Four team members are assigned to this job.
- The data are considered highly sensitive.
- The committee has asked for opinions of personnel at testing locations to ascertain level of compliance with weapons testing procedures.
- There are three sites across the country where testing is conducted.
- GAO does not have access to a list of personnel at testing locations but does have a list of positions that are involved in the testing program.
- 300 weapons testing personnel will need to be contacted from a population of 800.
- The committee is concerned that some more senior supervisory officers may have a vested interest in influencing responses to the survey.

**Scenario 5**

GAO has been asked to examine the causes and results of detention time - the waiting time at shipping and receiving facilities - delays experienced by truckers during their deliveries. We were asked to determine how: (1) regularly do truck drivers experience detention time and what factors contribute to detention time, (2) does detention time affect the commercial freight vehicle industry, including the impact on federal hours of service requirements, and (3) what federal actions could be taken to address the issues associated with detention time?

Here are some facts to consider when deciding on the survey administration method:

- The team has been asked to deliver a report in twelve months.
- Four team members are assigned to this job. Additional assistance can be offered by other analysts on a short-time basis.
- The respondents will be truckers to get a better idea about their experiences with detention times. There is no centralized list with the names and contact information about truckers. Because there is no known universe of identified truckers, it may be difficult or impossible to create generalizable results from the survey.
- Truckers are unable to be contacted for long periods of time due to the nature of their job. However, there are some common locations where truckers could be expected to make stops such as truck stops.
- The final version of the survey with appropriate formatting is three pages long. It contains mostly open-ended questions.

