

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g. establishments, State and local governmental units, households, or persons) in the universe and the corresponding sample are to be provided in tabular form. The tabulation must also include expected response rates for the collection as a whole. If the collection has been conducted before, provide the actual response rate achieved.

In summary:

- Number of potential respondents not to exceed 300,000 international passengers
- Selected from over 100 international airlines (both U.S. and foreign based carriers)
- Airline/passenger departures from at least top 27 U.S. gateway airports

The population of potential respondents consists of all international air passengers who are traveling on participating airlines whose trip originates in the United States or includes the United States in their itinerary. There are essentially two separate populations (universes): non-U.S. residents originating inbound to the U.S. and U.S. residents originating outbound to overseas or Mexican destinations.

The sample is designed around the geographic detail desired for the resulting estimates and the specific airlines willing to participate in the survey. The design is a stratified, two stage cluster sample, where scheduled flights are randomly selected from strata defined by airline and foreign destination in the first stage. The responding travelers on each flight constitute the second stage of the sample. When the SIAT is conducted on a selected flight, those passengers who respond, are considered to represent all passengers on that flight.

The development of the sample was influenced by the number of travelers to and from the United States by country of residence, area visited, and scheduled international air carrier. The design was also influenced by the desired accuracy and detail of the resulting estimates the airlines' willingness to participate in the survey, the availability of a sample frame, and the costs of the survey.

Stratification is used to ensure that all participating airlines and residents of countries of interest appear in the sample. In the case of foreign flag carriers, stratification by airline alone is sufficient in most cases, since they tend to serve mainly residents of their native countries and U.S. residents on flights to the United States. U.S. carriers, serving several markets of interest, are stratified by carrier and foreign destination.

Flights are selected within each stratum by simple random sampling using a random number

generator. Since a random sample of passengers on a flight would be difficult for the flight crews to implement, the second-stage sample includes all passengers on a given flight who respond to the survey.

The sample frame (list from which the sample is drawn) is the monthly roster of scheduled flights departing the United States on the airlines participating in the survey. Although quarterly estimates are the goal, sampling is performed monthly to distribute the sample over each quarter to account for seasonality. Flights to be sampled were at one time limited to those occurring during the week, beginning with the third Monday of the month. This limited frame has been expanding to other weeks of the month.

The number of flights to be sampled from each stratum were determined on a per stratum basis, with consideration given to the target number completed surveys for the year, number of flights, number of passengers carried, foreign originations/destinations, number of participating U.S. and foreign carriers serving the area, and airline cooperation.

In practice, some departures from the original sample design are necessary. Substitution for sampled flights is permitted in some circumstances. It has been acceptable, for example, for an airline to change the day of the flight to be surveyed if circumstances prevent the survey's execution on the sampled day. For example, we would not sample the same day as the airline sponsored surveys for its own passengers.

For various reasons, some airlines occasionally do not participate for the entire quarter; so, their samples are not distributed over all months of the quarter. In some cases, strata are eliminated from the sample because of difficulties by the airline in conducting the survey on the desired routes.

2. Describe the procedures for the collection, including: the statistical methodology for stratification and sample selection; the estimation procedure; the degree of accuracy needed for the purpose described in the justification; any unusual problems requiring specialized sampling procedures; and any use of periodic (less frequent than annual) data collection cycles to reduce burden.

Design and Procedures for Information Collection:

a) Statistical methodology for stratification and sample selection:

Refer to B-1 above, Potential Respondent Universe and Sample

Design. b) Estimation Procedure:

The primary data sources for computing estimates are the SIAT responses given that there are

two separate populations of travelers.

Information developed by the NTTO’s *U.S. International Air Travel Statistics* series from the Department of Homeland Security (DHS) APIS (former I-92) flight reports and *U.S. International Arrivals* program based on DHS I-94 arrivals forms are also used.

These respective data sources (i.e., completed questionnaires) are collected for each flight departing the United States, giving the number of U.S. citizens for the flight and non-U.S. residents visiting (arriving) the United States. These sources provide the input to the weighted ratio estimation procedures which expand the sample information to represent all visitors from/to the United States.

NTTO tracks Survey response rates monthly.

Passenger responses are collected from two sources:

- 1) Those distributed/collected in the airport boarding (gate) areas having been administered by sub-contractor field services (BA);
- 2) Those distributed collected by airline flight attendant crews while on-board the flight (IF)

Passenger Response Rates	In-Flight (IF)	Including Boarding Area (BA)*
2001	52%	48%
2007	32%	68%
2013	37%	75%
2015	43%	73%
2016	47%	71%

This illustrates the ‘relative success’ of engaging the airline industry’s IF cooperation since 2007. However, this improvement is due to the impact of specific carriers. Ironically, although more carriers are participating overall, IF carrier cooperation, as a percentage of all passenger responses, has been dropping, i.e., eight percent of all participants in 2016.

Overall, however, when including *collections made in the airport gate departure areas the average passenger response rate (BA+IF) was 71 percent in 2016. Collections in the boarding area are higher since field service personnel (sub-contractors) are dedicated to this pursuit. IF relies on the voluntary good will of the flight crew.

NTTO also tracks the response to each question on the questionnaire and the breakout specifically for the spending question. These analyses show changes in individual questions which will be used the next time NTTO revises the survey instrument. NTTO has seen variation in responses to spending questions for total trip spending, fare expenditures, and expenditures within the United States for the inbound data. NTTO and B.E.A. are collaborating

on this review.

Estimation and Reliability of Results for U.S. Residents (Outbound)

The SIAT responses are the primary data source for computing estimates. Information developed from the Department of Homeland Security APIS (Advance Passenger Information System) is used in conjunction with SIAT responses.

The SIAT responses provide information on distributions of variables and relationships among survey items as well as information relating the port of debarkation to the residence of the passenger. The DHS APIS (I-92) data provide total passenger volumes by port of debarkation and the number of U.S. and non-U.S. citizens.

A weight is calculated for each survey respondent. It is defined as the number of passengers, departing from the United States via scheduled international air carriers, represented by the respondent. Calculation of the weight is a multi-step process.

1. The initial weight of a respondent is one ('1'), unless children are part of his or her travel party.

In this case, the initial weight has a value greater than one, depending on the number of children and the size of the travel party.

2. Although there is non-response on each flight surveyed, the respondents are considered a random sample of the passengers, and each weight is increased to cover non-responses on the flight.

3. Each weight of a respondent in a stratum is increased to represent all travelers on all flights on the stratum.

4. The APIS (I-92) data are incorporated into the weights by port of debarkation to represent not only the participating, but also the nonparticipating airlines in the survey.

Estimation and Reliability of Results for Non-Residents (Inbound)

The survey responses are the primary data source for computing estimates. Information developed from the DHS I-94 reports is also used.

The survey responses provide information on distributions of variables and relationships among survey items as well as specifics relating country of residence and port of customs of the respondent. The DHS I-94 data provide similar information for country of residence, port of customs and mode of arrival. The Survey data are weighted based on the I-94 data by air-mode of arrival.

A weight is calculated for each survey respondent. It is defined as the number of passengers, departing (returning to country of residence) from the United States via scheduled international air carriers, that is represented by the respondent. Calculation of the weight is a multi-step process.

1. The initial weight of a respondent is one ('1'), unless children are part of his or her travel party, in which case, the initial weight has a value greater than one, depending on the number of children and the size of the travel party.
2. Both the I-94 data and survey responses are sorted and summarized by country of residence and port of customs information.
3. The weight computed for individual survey responses is the result of directly proportioning the I-94 data to the surveys.
4. The weights determined by the limiting variables in the survey responses match the corresponding control totals from the I-94 data summarized in the same manner. The weights are then used in standard weighted ratio estimation formulas for calculating the distributions, means, and medians found in the published tables.

Because of the multistage nature of the sample design and the resulting computational burden, sampling variability has not been calculated for the estimates. Instead, the reliability of a set of related estimates is indicated by the number of respondents to the relevant questionnaire items. The more respondents, the more reliable is the estimate. Judgment must be used in deciding on the degree of confidence to place in an estimate, and in its proper use. Likewise, non-sampling (response and processing) errors have not been estimated, but may be significant, especially when combined with sampling variability. Response errors may be of some significance due to inaccuracies arising from language translations and currency conversions.

A low number of respondents for a quarterly estimate can cause severe distortion because of the large influence any one respondent exerts on the overall value of the estimate.

CIC Research, Inc., the contractor for the SIAT, has worked with a university statistician in 2017, on a trial basis, to estimate the effects of sampling variability and non-response errors. These two issues would help accurately reflect the reliability and validity levels of data produced. The preliminary results if this analysis is available for review.

c) Degree of accuracy:

The degree of accuracy (measurement of how close the estimation comes to actual universe)

of SIAT results have been determined for airfares (only) based on a study which compared SIAT airfares with DOT's OD1A carrier reported airfares.

<https://travel.trade.gov/research/programs/ifs/Synopsis%20SIAT-DB1B%20Results.pdf>

The principal development and planning phases for the survey have been completed by Transportation System Center (TSC). Weighting and estimation refinements were made by Response Analysis, and CIC Research, Inc. The estimation of reliability (higher with a response rate of 400) and validity (are we measuring what we aim to measure) levels can be developed. Each year, an analysis is performed to review the port of entry weighted data and compare it to the share of total overseas arrivals and arrival by port of entry. The variance between the I-94 travel population figures and the weighted SIAT data at the country of residence and port of entry is 0.0 after the weighting process has been completed. This analysis shows the weighting system can help us correct for these two known population figures and thus help ensure the quality of the data released.

d) Questionnaire Content and Design:

The questionnaire development was guided by the normal standards of questionnaire design to encourage the maximum response by the surveyed passengers. The questions are stated as simply and clearly as possible, and definitions of possibly confusing terms are provided on the forms. To reach a majority of non-English speaking travelers, the questionnaire was translated into eleven additional languages (Arabic, Chinese, French, German, Italian, Japanese, Korean, Polish, Portuguese, Russian and Spanish).

For the 2012 questionnaire change, input was solicited from the travel industry and other agencies of government. NTTO received guidance and advice from the U.S. Census Bureau as to questionnaire design and question verbiage. Draft versions were field tested and foreign language versions were translated and 'back-translated' by language specialists.

In printed form, there is an English only version and eleven versions with the English version on the first half followed by the foreign language version. An announcement at the top of each form tells the respondent of the availability of the other versions. Thus, the questionnaire has been designed to minimize the language obstacle that might discourage a passenger from responding. Both resident and non-resident questions are included in the one survey instrument.

The language versions added were a requirement of the foreign flag carrier's entry into the program. Without it, the airlines felt they would not obtain a representative sample of their passengers.

The questionnaire design facilitates easy distribution and collection by eliminating the necessity for the field contractor to determine the citizenship of the passengers. They need only give one form to every adult passenger in the boarding area. Likewise, the in-flight survey

method is facilitated since the flight attendants are not required to determine the passenger's citizenship. Response to this survey is dependent on the flight attendants' ability to distribute and collect the questionnaires in a timely fashion.

Distribution of the survey instrument is conducted by using one of two methods. The first is the in-flight method. The other method is to distribute and collect the questionnaires in boarding areas by field survey sub-contractors. One method or the other is used based on an agreement with the participating carrier. Most airlines prefer that we survey their passengers in the gate area pre-departure. In 2016 about 92 percent of collections are from the boarding area.

The questionnaire requests international air travelers departing the United States (to overseas or Mexico) to provide information on their activities, expenditures, travel and demographic characteristics while traveling.

e) Geographic Area Structure:

The geographic area structure for this survey provides a sufficient level of detail for analyzing the passenger traffic between regions of the United States, and the principal regions and countries of the world. The eight world regions are based on those used in the U.S. International Air Travel Statistics Program produced by NTTO: Africa, Asia, Caribbean, Central America, Europe, Middle East, South America and Oceania.

The primary geographic units of analysis for the United States will be the eleven modified Bureau of the Census Regions: New England, Middle Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, Pacific, Pacific Islands and Atlantic Islands. Statistics are also developed for states, large metropolitan areas (MD/MSA's), and selected major tourist attractions to the extent that response frequencies will permit. NTTO's ability to provide estimates is largely dependent upon the total number of respondents, which changes based upon the funding level obtained for the program.

The structure represents a compromise that must be made if reliable statistics are to be produced. The amount of the geographic coverage is based and the cost and sample size required for the survey. Any additional countries to be covered would require the addition of airlines, flights, and passengers to be surveyed, or a reduction in the sample sizes of those already covered.

Mexico is treated separately in reports on: "Mexican Travelers to the U.S." and "U.S. Travelers to Mexico." Similar breakouts are provided for the ports, cities/states and destinations as in the overseas reports.

f) Airline and Airport Participation:

Analysis provides information on the total and regional coverage of air traffic between the United States. The APIS (I-92) data has been used to help identify airlines for inclusion into the SIAT. It will also be used in the future to identify the target carriers to include in the Survey. NTTO uses this data to identify carriers generating U.S. citizen and alien travel to and from this country. This information is critical to the success of the SIAT, because data from passengers on these participating airlines are weighted to be representative of all regional passenger traffic. This analysis helps NTTO improve our regional representativeness in the United States, and abroad. Carriers that have added new ports to their route structure are now surveyed as they are added to ensure the program remains representative of world travel patterns. NTTO has been analyzing this data by airline for each port and then overall for the airline participation. Additionally, the analyses are developed at an airport level to improve the quality of the collections at the port level as well. The reason for the shift is that collections are now more focused upon the airport intercept method than the historical in-flight method ensuring better overall response rates. Collections in 2008 were 58 percent from the boarding area and 42 percent from in-flight collections. In 2009 boarding area surveys comprised 65 percent of the total collections, and in 2010 it expanded to almost 73 percent. As cited earlier about 92 percent of collections were in the gate area in 2016.

To keep the survey representative, we have been using the costlier boarding area survey method. This methodology also facilitates individual airline participation and improves airline response rates, and ensures global coverage. An in-depth discussion of the boarding area method versus the SIAT method is provided for in the 12/7/17 **Request for Information (RFI)** <https://travel.trade.gov/tinews/archive/tinews2017/20171121.asp>

By selectively using the boarding area survey, important airlines that would not otherwise participate in the In-Flight Survey are included. Historically, the airport surveys were conducted since the 1990's at Chicago, Dallas, Houston, JFK, Miami, Newark, San Francisco, Sanford and Guam's International Airports. NTTO has over time tried to convince each of the airlines to switch to the less costly in-flight survey method. In the cases where our contractor has been able to develop a personal rapport with a decision-maker at each airline, we have been able to switch them to the preferred in-flight survey methodology. The rapport is only developed through personal visits that included follow-up consultations to ensure the survey meets their needs.

Since money has not always been available for this purpose, we have had limited success. As reported earlier, there has been a shift from in-flight collections to obtaining surveys from passengers in the boarding area at the airport. The overriding rationale has been labor contract issues with carrier personnel covered by collective bargaining agreements.

Without additional resources to cover the increased costs, NTTO turned to the travel industry.

It started in Philadelphia. The international marketing director for the local convention and visitor's bureau wanted 'better data' since their reporting of international inbound travel was deficient. NTTO (OTTI) and the Philadelphia CVB tried several meetings with the airlines (US Air, which had dropped out of the IF) and while it helped in the short term, cooperation from the airlines continued to decline. So, the PHL airport authority was approached to see if they would assist us in collecting surveys from passengers at departure gates within the airport. The same sample selection method was used, but the focus was now upon the airport, not the airline, and the quality of the data collected as well as the number of surveys.

In 2008, this method was expanded to Orlando International with similar results. In 2009, by working with industry contacts we expanded the program to six airports. In 2010, we were surveying at eight airports, and in 2011, it expanded to 14 airports. The airports in 2011 were Atlanta, Baltimore, Denver, Dallas/Ft Worth, Detroit, Honolulu, Houston, Las Vegas, Los Angeles, Minneapolis, Orlando, Philadelphia, San Juan, and Washington Dulles.

For the first time, we obtained industry support from two airports (Dallas/Ft Worth and Houston)

which had traditionally been covered in the national survey program. The reason for adding these two ports were that historically, the program contractor just could not obtain enough surveys from travelers at either airport. So, the Texas Office of Tourism, a long time custom report client, requested internal funds to pay NTTO to supplement the collection of surveys above what had been normally collected.

NTTO staff is shifting away from the 'paid in' approach to cover collections since our increase in budget enables us to increase collections. We encourage the industry to add even more airports to this program through an 'in kind' approach. For hard to reach airports, i.e. Honolulu (HNL), the airport/state will have their own field service personnel hand out/collect the Surveys and NTTO provides an annual custom report.

In 2017, the Supplemental Airport Survey Program collected 9,250 additional surveys at no cost to the U.S. government. To learn more about this program, please visit the NTTO website at: <http://travel.trade.gov/research/programs/ifs/survey.html>

3. Describe the methods used to maximize response rates and to deal with nonresponse. The accuracy and reliability of the information collected must be shown to be adequate for the intended uses. For collections based on sampling, a special justification must be provided if they will not yield "reliable" data that can be generalized to the universe studied.

NTTO has historically worked to improve response rates as resources allowed. We have also developed many innovative approaches to improve cooperation that has proven

successful when funded.

Passenger Response Rates:

Challenges: In that the Survey is voluntary, passengers are not required to complete, and as with all surveys, there will be refusals. In addition, although the survey is available in twelve languages, there will be passengers who will not be able to respond due to language differences. NTTO plans to reduce this shortcoming by offering other language translations in the future (i.e. Hindi). For IF non-participation is a possibility if the flight happens to be short (U.S. to Caribbean) or at night ('red eye') when passengers are sleeping.

The airlines are a second area of weakness in the system for collecting completed surveys. Here, airlines staff have contributed up to 2,500 hours of time per year to distribute, collect and send surveys to the contractor. Again, airlines staff are not contractually required to distribute the surveys. Problems associated with the voluntary distribution of the surveys by airline personnel include: flight attendants are too busy and unable to pass out all or any of the questionnaires; flight attendant unions' resistance to conducting in-flight surveys; the surveys could be distributed but not collected; the collected surveys may not be returned to the contractor; flight packages can be misplaced or lost (via the mail or by the airline personnel before they are to be distributed or after they are collected). High turnover of airline management personnel and flight attendants who are asked to voluntarily assist NTTO also complicates administration of this survey.

The survey, instructions, and a card requesting information from the flight crew are sent each month for selected survey flights to the Airline Service Manager. The surveys are then put on board the survey flight. The information requested asks the flight crew to provide NTTO with a count of how many surveys were administered for that flight. For those flights returning this information, the number of completed questionnaires is taken as a percent of the total number distributed. This provides the reported response rate.

2016 In-Flight Response Rates			
Quarter	Number (Kits) Sent	Number (Kits) Completed	Percent Complete
First	257	110	43%
Second	259	191	74%

Third	256	110	43%
Fourth	299	91	30%
Total	1071	499	47%

Another effort to improve response rates has been the use of the boarding area (BA) survey method for selected carriers. The combination of the two methods has helped NTTO. The boarding area survey method was designed to encourage a higher response rate. In support of this survey, conducted in boarding areas in airports instead of in-flight on board the carriers, is the tighter control of the distribution and collection of the survey instruments, and the dependability and follow through of field survey contractors instead of flight attendants. The timing of returning the surveys to the contractor is also reduced.

More carriers are apt to participate in the BA program since the burden on the carrier is reduced. The addition of carriers would greatly enhance the coverage on all overseas and Mexican routes. Interference with airline boarding or check-in procedures are virtually non-existent since all survey activity ceases at the first boarding call. The sample design is also being improved because of the even distribution of carriers departing from major airports and final distributions in foreign ports.

The problems associated with the boarding area surveys are: late arrivals to the boarding area do not receive an opportunity to complete the questionnaire; passengers on board intermediate flights are not always allowed to disembark; passengers from feeder flights are not commonly available in the boarding area; many passengers and late arrivals are either not checked in early enough or are checked-in and wait in other parts of the airport (i.e., lounges, shops, VIP waiting rooms, etc.); the advent of common boarding lounges makes identification of passengers for the flight difficult. Surveying is limited to U.S. gateway departures.

Security clearances for surveyors must be obtained from the airport management and airline administrative offices. Surveyors notify station and gateway managers of the impending survey activity. With tighter airport security measures being implemented, NTTO must be assured by airport, airline and TSA authorities that sub-contractors will not encounter clearance prohibitions. Because every airport and every airline work differently procedurally, obtaining access is very time consuming and sometimes difficult. For example, in January through March 1991, NTTO could not survey any of the airlines using the boarding area method because of security reasons due to the Persian Gulf War. In addition, due to airport restrictions imposed by the Los Angeles World Airways, NTTO field service personnel could not have access to passenger gates at LAX International Airport for 10 years.

With the problems associated with collection and returning the surveys, the current (the option

of using either in-flight or boarding area) methodology still is the most cost-effective way to collect this information. NTTO spent time visiting the carriers and/or discussing issues with airline representative to the U.S. DOC Travel & Tourism Advisory Board (TTAB) which have proved very beneficial in helping us to improve the in-flight and boarding area survey methods. We have customized our survey procedures to meet the needs of the airlines. Where possible, we adopt our procedures to meet the carriers own internal survey methods. While this has had an added burden to the administration of the surveys to each airline, it has produced excellent results.

To improve response rates, NTTO has investigated the following ideas reported in the past clearance package as time, money and cooperation from the carriers dictated:

1. Better instructions on the flight packages. Improvements to the instruction sheets for the flight crew have been made. Several carriers assist us in translating the instructions into the language of the host country. We hope to work with others to continue this process. Benefits will be limited as we continue to move towards more and more collections at the airport.
2. Development of a monthly and quarterly airline response rate file. This was implemented in 1989, and continues to date. As you can see by the improved response rates, this tracking process has been one of the reasons for the improved response rates. It has also allowed us to find which carriers are not cooperating. These airlines have been approached about the specific ports where the problems occur. Because of the movement towards airport intercept collections, we have now also focused upon tracking the collections by airport. Each year, we compare total collections to the I-92/APIS total air traffic data. Adjustments are made to refine next year's sample to bring the collections closer to the travel population figures. For example: In 2014, the NTTO dramatically increased the sample at Miami, and Los Angeles. We added Ft. Lauderdale to the SASP program, at the perfect time. Ft. Lauderdale ended 2014 with some of the fastest growth for air traffic data. Likewise, based upon the analysis of the I-92/APIS air traffic data, adjustments were made at each port to better reflect survey collections.
3. Implement an enhanced airline utilization program. This project includes efforts to explain to the airlines how these airline-centric data (individual airline reports) can be used as a planning tool. Part of this system would look at problems of implementation and their effect on the quality of the data. **Our efforts here have been significantly upgraded since 2012.** 1) Distribution of airline reports has improved. NTTO/CIC now distributes reports to airlines twice a year (January through June; and annual), in excel format. Distribution is made to an electronic lock box to the attention of airline points of contact. We can determine when the report has been downloaded. 2) NTTO follows up directly with airline points of contact regarding any questions they may have on content/format. 3) NTTO participated in

the World Routes Conference (Chicago, September 2013), meeting face to face with international airline route planners. 4) NTTO is developing an active network of airline users as a vehicle for discussing SIAT data and potential improvements to the airline reports.

4. Incentive programs for the Airline Service Managers (ASM) and Gateway Managers (GM). Certificates of appreciation had been provided to both groups, respectively. In addition, letters of thanks were sent to the CEO's for the U.S. flag carriers, and the Directors of North American operations for the foreign flag carriers. The head person for each airline was advised that a specific GM/ASM had been very cooperative and instrumental in the success of the program for that airline. We have learned that the CEO and Directors, in certain cases, rewarded the ASM's and GMs. **Since 2012 we have been able to contact several airline ASM/GMs for the remaining in-flight carriers, i.e. Lufthansa, Singapore, JAL and All Nippon. Note: US Airways was the last U.S. based airline to opt for in-flight collections. However, due to its merger with American Airlines (boarding area option) US Airways will become a boarding area carrier in 2015.**

5. Provision of pencils to survey passengers. It eliminates a reason for not completing the survey because the passenger did not have any way to record their responses.

What seems to hold the most promise is to develop new ideas to expand and improve the program. The following ideas, in various stages of development, have been designed to assist the Department of Commerce respond to the new requirement mandated by Travel Promotion Act of 2009 (TPA). The new ideas include:

1. Redesign of the Supplemental Airport Survey Program (SASP) to focus on an 'In-Kind' arrangement. Several airports, due to their 'remote' locations and/or their ability to efficiently administer the SIAT, do conduct surveys on NTTO's behalf. Arrangements are in effect with Honolulu (HNL), Detroit (DTW), Boston (BOS), Philadelphia (PHL), Baltimore (BWI), Minneapolis-St Paul (MSP) and New Orleans (MSY). Goals are being established for Saipan (SPN) and San Juan (SJU). In planning stages are Raleigh-Durham (RDU), Austin (AUS) and San Antonio (SAT). With local field services or airport personnel surveys are administered and then mailed to NTTO's contractor for processing. Our contractor pre-selects flights to be surveyed and provides supplies (questionnaires, etc.) to the local airport. NTTO provides an annual custom report to the local tourism authorities.
2. In addition to implementing the SASP at as many of the top 40 ports as possible, NTTO will be talking with the industry to obtain fees to expand the total sample frame or focus on key markets, i.e. China (PRC), Brazil and India. Industry resources are tight and there is competition with the Corporation for Travel Promotion (Corporation) (or the BrandUSA.com) who is working with industry to request matching funds to obtain access

to up to \$100 million in ESTA fee money for travel promotion. But the research data NTTO provides may also help the Corporation and industry justify their investment and assist them in planning the promotion activities as well as provide metrics to gauge success.

3. Work with the U.S. Department of Homeland Security (DHS) and find an industry sponsor to test using the Internet as a collection mechanism. In 2009 DHS implemented the Electronic System for Travel Authorization (ESTA). This system requires that travelers who are not required to obtain a visa must first register on this site to be pre-approved to board an international flight. DHS has stated they would work with us to grant access to the ESTA subscribers enabling NTTO to contact potential travelers if they are willing to complete a survey on their next international trip. While DHS has expressed their willingness to do this, no funds are available to test it. It should be noted that VWP (visa waiver program) travelers account for only two-thirds of all overseas visitors. Also, to utilize this approach would require travelers to disclose their identities and would encumber the collection process by having pre-trip and post-trip portions of the survey.
4. Continue to pursue digital/electronic approaches to data collection. Advances in in-flight entertainment (IFE) systems, personal electronic devices, kiosks, internet connections to airline 'dot.com' systems, global reservation systems, etc. are being monitored and studied as possible alternative collection methodologies.
5. NTTO continues to work with industry and has issued a 12/7/17 **Request for Information (RFI)** <https://travel.trade.gov/tinews/archive/tinews2017/20171121.asp>. We received eight detailed responses by February 5, 2018. NTTO held a vendor conference call for all interested parties and conducted one-on-one breakout sessions with each vendor. NTTO will craft the request for proposals in spring 2019 based in part on the vendor feedback sessions.

4. Describe any tests of procedures or methods to be undertaken. Tests are encouraged as effective means to refine collections, but if ten or more test respondents are involved OMB must give prior approval.

NTTO will continue with both the existing in-flight survey and boarding area survey methodologies. Both methods have their limitations and advantages and to use one method over another has not proven to be the most effective methodology. Even though the airline response rate has been shown to increase by administering a boarding area survey, the cost of this method is several times that of the in-flight method. Thus, to implement a total boarding area survey approach would be costly. We have been fortunate to have received budget commitment for the full year collections early on which enabled NTTO and its contractor to leverage better rates from its sub-contractors (field services at the various airports)

1. Charting of the number of **carriers** that participate. This has been used since the initiation

of the program, although better records are now maintained. Currently, we track a carriers' performance over time, and now track it on an airport specific (**gateway**) basis. This program will continue, and it will be used to help target how carriers are utilized and the resulting improvements in the response rate program. It should be noted that the number of participating carriers has increased from 70 (2003) international airlines to 110 (2017). Even with airline consolidation there have been additions due to new carrier startups (Norwegian Airlines) and domestic carriers adding international service (Southwest Airlines)

2. Better tracking of response rates. NTTO tracks monthly airline, and passenger response rates. The response rates have been used to identify gateway performance. Steps are taken to work with problem field service performance (boarding areas) and low airline response rates (in-flight).

3. Charting sales of the national reports. The lists are now reviewed closer to see who is buying the data. We look for repeat sales, and determine who should be buying the reports. In fact, past subscribers were asked to help us improve the report formats. In addition, we are now working with several associations, and their members to further refine the data outputs. In 2014, the NTTO started a process to track sales and record what is being purchased by client and have expanded this process since.

4. Charting sales of the customized special reports, data tables and data files. This process has helped us identify the users, and possible new types of reports for the industry. Many of the refinements to the data processing have been a result of the special reports generation. It has also required an inventory of programming runs for future uses. No two custom reports are the same since due to differing client requirements. Sales reports are available for review.

5. Investigate alternative methodologies. NTTO is constantly reviewing the research articles, and talking to companies about improving the program. To date, we have not found a better method than the one in current use. Major refinements have been made to the SIAT program. We plan to continue reviewing options with the assistance of our Travel and Tourism Advisory Board (TTAB).

6. Airport Authority/Hotel & Motel/Rental Car/Credit Card Reports. NTTO has been working with credit card companies and airport authorities regarding their usage of SIAT data. To date several large credit card companies have subscribed to the data. NTTO collects information on the ratings of airports, along with characteristics data on the airports arriving and departing passengers. NTTO is developing an airport-centric report. NTTO also collects information on the hotel chains used by international travelers to and from the United States. It also has similar information on the use of rental car companies by company name. Initial discussions have been held with a few airports and we plan to expand it until we can develop a new report based upon user inputs.

7. Better Utilization of the I-94, APIS (I-92), and SIAT data proofing analyses. NTTO has expanded the analyses of source data that supports the SIAT data each year. We also compare the weighted sample to the known number of arrivals to the United States and their ports of entry. This test has shown the expansion process does work. It has also helped us determine improvements in data collection. Should airlines, airports, countries, states, cities, sectors, or questions that indicate there may be a problem, NTTO uses the data to analyze and resolve the problem. **Note: subscriber usage and analysis of the SIAT data and reports is itself a test of the reliability, validity and to some degree the accuracy of the data.**

9. Tracking the number of surveys used. Tracking usage by the different language versions, by respondents, and airlines, NTTO improves inventory control. Preparing for questionnaire print requests further in advance has proven to save money on reprinting costs.

10. Track the response to each question. This is performed to help NTTO with future revisions. The questions with the lowest response will be reviewed to determine how they can be improved. It can also tell us if the survey is getting too long and needs to be scaled back. Watching the performance by question will help us obtain better response rates as we improve the wording, layout and design of future survey instruments.

These and other evaluation approaches will be used to help further enhance this very useful SIAT research tool for the travel industry.

5. Provide the name and telephone number of individuals consulted on the statistical aspects of the design, and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.

Judith Schwenk of the Transportation Systems Center, U.S. Department of Transportation (Volpe Center) was the original mathematical statistician who developed the survey sampling design and analysis procedures. The Volpe Center can be reached at (617) 494-2000.

Dr. Reuben Cohen, Senior Vice President of Response Analysis was the statistician responsible for the technical direction of the program from April 1984 through June 1985. Response Analysis is now part of GfK Custom Research <http://www.gfk.com> .

Dr. Gordon Kubota, President of CIC Research, Inc. is the statistician that is responsible for the NTTO program beginning from July 1985 and he may be reached at (858) 637-4000.