AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

2. AMENDMENT/MODIFICATION NO 3. EFFECTIVE DATE 4. REQUIREMENT/PURCHASE REO. NO.
POC001 See Block 16C R8H-12-0025
5. PROJECT NO. (if applicable)

6. ISSUED BY 7. ADMINISTERED BY (if other than item 6)
CODE CODE
DHS/OFAC/ST/OEOC DHS/OFAC/ST/EXB/C

U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Division
245 Murray Lane, SW, #0115 245 Murray Lane, SW, #0115
Washington DC 20528-0115 Washington DC 20528-0115

8. NAME AND ADDRESS OF CONTRACTOR (No. street, county, State and ZIP Code)
RESEARCH TRIANGLE INSTITUTE
PO BOX 12144
RESEARCH TRIANGLE PARK NC 27709-2194

9. AMENDMENT OF SOLICITATION NO

AMENDMENT NO.

14-10-13-DHS-FOIA-20150402-Production

10. MODIFICATION OF CONTRACT/ORDER NO.
HSHQDC-12-P-00087

10A. DATED (SEE ITEM 11)
09/14/2012

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS
□ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is / is extended. / is not extended
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 6 and 15 and returning a copy of the amendment; (b) By acknowledging receipt of the amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. Failure of your acknowledgement to be received at the place designated for the receipt of offers prior to the hour and date specified may result in rejection of your offer.

12. ACCOUNTING AND APPROPRIATION DATA (if required)
See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority. The changes are made in the contract order no. in Item 14)
X. B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 42.103(b).
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY:
D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor □ is not. □ is required to sign this document and return copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitations/contract subject matter where feasible)

DNS Number: C06B28-12-0000
Division/POA: Human Factors/Behavioral Sciences Division
Thrust: Personal Identification Systems
Program: Biometrics
Project: Biometrics
Performer: Research Triangle Institute (RTI)
Project Manager: Dr. Richard Legault, \(0(0)

AUC: 70-06-1161

The purpose of this modification is to change the Contracting Officer's Technical
Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore charged, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)
Dr. Diane Schatz

15B. CONTRACTOR/ORDERER

15C. DATE SIGNED
09/16/2012

16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)

16C. DATE SIGNED
09/16/2012

NSN 7540-01-152-8470
Previous edition unusable

epic.org
14-10-13-DHS-FOIA-20150402-Production

STANDARD FORM 30 (REV 10-93)
Prepared by GSA
FAR (48 CFR) 53.243
000199
NAME OF OFFEROR OR CONTRACTOR
RESEARCH TRIANGLE INSTITUTE

<table>
<thead>
<tr>
<th>ITEM NO. (A)</th>
<th>SUPPLIES/SERVICES (B)</th>
<th>QUANTITY (C)</th>
<th>UNIT (D)</th>
<th>UNIT PRICE (E)</th>
<th>AMOUNT (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Representative (CDTR) from Dr. Sun Foo to Dr. Richard Logault at no additional cost to the Government. The CDTR should read as follows: Dr. Richard Logault Human Factors/Behavioral Sciences Division Science and Technology Directorate Department of Homeland Security Washington, DC 20520</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All other terms and conditions remain unchanged. AAP Number: N/A DO/DPAS Rating: NONE. Period of Performance: 09/14/2013 to 03/13/2013
AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

CONTRACT NO: P00002

AMENDMENT NO: 1

AMOUNT OF SOLICITATION NO: 0

U.S. Dept. of Homeland Security
Office of Procurement Operations
SAT Acquisition Division
245 Murray Lease, M2115
Robinhood DC 20528-0115

U.S. Dept. of Homeland Security
Office of Procurement Operations
SAT Acquisition Division
245 Murray Lease, M2115
Washington DC 20528-0115

Date Amended: 09/14/2011

FACILITY CODE

11. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT OR ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE:
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO Clause(s) or subclause(s) of an order. The changes set forth in Item 14 are made in the contract order

B. THE ABOVE NUMBERED CONTRACT ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in award office

X. THE ABOVE NUMBERED CONTRACT ORDER IS MODIFIED TO REFLECT THE CONTRACTOR'S MODIFICATION OF THE CONTRACT OR ORDER

12. ACCOUNTING INSTRUCTIONS TO BE Followed:


E. IMPORTANT: Contractor (Name)

F. **MODIFICATION NO. C04968200-0001

Division: Human Factors/Behavioral Science Division
Thrust: Personal Identification Systems
Program: Biometric
Project: Research Triangle Institute (RTI)
Principal Investigator: Dr. Richard Larkin, [0][0]

AM: 12-05-1511

Continued...

Excerpt from document: all terms and conditions of the Solicitation/Modification of Contract or Order are applicable to the changes set forth in Item 14.

[Signature]

Date: Apr 4, 2013

STANDARD FORM 30-1 MAY 1997

Printed by GSA
FAR (40 CFR) 27240

000201
The purpose of this modification is to change the Contracting Officer and extend the task order base period of performance through 31 December 2013 at no additional cost to the Government, in accordance with the attached revised Statement of Work (10 pages).

Contracting Officer should read as follows:
Duane Schatz
DHS S&T OPC Stop 0210
245 Murray Lane
Washington, DC 20528-0210

The total amount obligated remains at $905,586.00 and the total value of the task order remains at

All other terms and conditions remain unchanged.

AAP Number: N/A DO/DPAS Rating: NONE

Period of Performance: 09/14/2011 to 12/31/2013

<table>
<thead>
<tr>
<th>ITEM NO (A)</th>
<th>SUPPLIES/SERVICES (B)</th>
<th>QUANTITY (C)</th>
<th>UNIT (D)</th>
<th>UNIT PRICE (E)</th>
<th>AMOUNT (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(C)</th>
<th>(D)</th>
<th>(E)</th>
<th>(F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Statement of Work for
Program Evaluations

U.S. Department of Homeland Security
Science & Technology Directorate
Resilient Systems Division

Task Order HSHQDC-11-F-00087 Modification P00002
PR No. RSHF-13-00034

This Statement of Work (SOW) outlines the activities that are involved in acquiring technical and consulting services in the social, behavioral, and economic sciences. These services will be responsible for addressing the methods, models and technologies to conduct program evaluations on biometric technologies within the Resilient Systems Division (RSD) of the Science & Technology Directorate (S&T).

I. BACKGROUND

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge science and technology in its quest to make America safer. The DHS S&T is tasked with advancing the scientific, engineering, and technological resources of the United States and leveraging these resources into tools to help protect the homeland. The Resilient Systems Division (RSD) applies the social and behavioral sciences in order to improve the detection, analysis, and understanding of threats posed by individuals, groups, and radical movements; to support the preparedness, response and recovery of communities impacted by catastrophic events; and to advance national security by integrating human factors into homeland security science and technologies.

The Quadrennial Homeland Security Review (2010) has identified Maturing and Strengthening the Homeland Security Enterprise (HSI) as a key DHS programmatic goal. DHS S&T provides those technologies, processes and expertise to the HSI in order to assist them in fulfilling their missions. However, DHS S&T has no formal, scientifically sound, program evaluation process to ensure that the mission is being met in a meaningful and efficient manner. Current S&T evaluation programs only test and consider the quality of the technology to be transitioned. A program evaluation approach that places a technology or other innovation within an operational context, and thus enables decision makers to assess the entire operational approach in which the technology or innovation is embedded, ultimately improving technology transition to the customer component agencies.

This SOW summarizes the work that is planned for program evaluations in DHS S&T. This work will be conducted through engaging the technology stakeholders, focusing the evaluation design on the technology and the purpose of the overall operational program, gathering and analyzing evidence, and producing a final report that will result in an improved program. Those lessons learned will help inform future DHS S&T program conceptualization and execution, and will lead to improvement in the quality and effectiveness of programs transitioned to customer component agencies.
II. SCOPE OF WORK

During the base period of performance, the Vendor will conduct program evaluations on the following DHS S&T programs: DHS Biometric Exit Pilots and the Rapid DNA project. In addition, there is an option for an evaluation of the Mobile Biometrics Project. The Vendor will develop and utilize a scientifically sound method to perform the following tasks:

- Identify and engage stakeholders;
- Determine evaluation needs;
- Develop measures of activities and outcomes;
- Identify, assess and gather data;
- Analyze the data;
- Reach operationally relevant conclusions; and
- Ensure the use and sharing of lessons learned.

Under this effort, the Vendor will be responsible for performing the following activities:

- Development of measures of progress;
- Assessment of the impact and effectiveness of the technology or innovation in the operational environment and identification of areas of improvement;
- Development of a baseline assessment of the operational program to inform the creation of an evaluation framework that is specifically tailored to the program and the technology being evaluated;
- Preparation of a final report identifying lessons learned and provides both S&T and the operating agency with a road map for building on the evaluation’s results. The report will be provided to the program managers of the component agency, RSD, and other DHS stakeholders.

III. SPECIFIC TASKS

The specific tasks that are involved in the evaluation of DHS S&T technologies are provided in the following paragraphs:

Identify and Engage Stakeholders

In consultation with RSD, the Vendor will identify and engage relevant stakeholders. These include those involved in program operations, those served or affected by the program, and the primary users of the evaluation (those in a position to make decisions about the program). Stakeholders will be systematically identified in conjunction with RSD. Stakeholders will have the purpose of the program evaluation explained to them, and how their participation in the process fits into the evaluation as a whole.

Description of the Program

The Vendor, in consultation with RSD, will specifically identify the purpose of the project and the research questions that it intends to address, with necessary special emphasis on the in-
practice implications of the technology or innovation on programmatic goals and objectives. The Vendor will then conduct a baseline assessment on the current program implementation or previously conducted pilots.

Focus Evaluation Design

The Vendor will then tailor the evaluation to the specific program and purpose of the evaluation. The Vendor will need to clarify who will use the evaluation results and how those results will be used. The Vendor will also consider the context of the program in order to determine the appropriate evaluation strategy that is best suited for the specific program. Where feasible and cost effective, the developed field experimental methods will be used by the Vendor, unless RSD approves another approach.

Identify, Assess, and Gather Data

As part of the design stage, the Vendor will responsible for the assessment of data needs and availability along with obstacles to and the necessary costs of data acquisition. The normal expectation from the Government is that both quantitative and qualitative data will be relevant to the conduct of an evaluation. Data of only one type will be used and collected if explained to the satisfaction of RSD. To keep costs low, data gathering by the Vendor will utilize existing program data to the extent feasible. To the extent that privacy and other rules permit, the data will be stored in a form that will allow the agency or S&T to reuse it in any follow-on or future work as appropriate without the payment of license or other fees.

Analyze Data and Reach Conclusions

After the data have been gathered, the Vendor will analyze the data using appropriate statistical and qualitative methods in order to assess program performance and to identify any gaps or weaknesses in or strengths of the technology as operationally applied. The Vendor will also be responsible for tying any conclusions to program standards of performance and to the extent there are weaknesses in the operational application of the technology or innovation, the Vendor will propose mitigation strategies.

Final Report

The Vendor will generate a final written report and provide any accompanying presentation slides that set forth the research goals, explains the research strategies, describes the research design as implemented and the data used with a discussion of their strengths and limitations, reports the methods and results of the analysis, including, where appropriate, tables, key statistical outputs or other information summaries and recommendations for actions in the form of a final report. The report will also include a brief executive summary and, if appropriate statistical tables, summaries of the qualitative data or other appendices. The copyright for the report will held by DHS.

This report will be made available to the program manager(s) of the component agency and to RSD. Any additional dissemination of the report will be made at the discretion of RSD. The
basis for the recommendations, their rationales and the data behind them will be explained by the Vendor to the responsible program manager(s) and any relevant stakeholders or other potential users that have been identified by the program manager. Up to five such briefings of up to 90 minutes in length may be requested by RSD.

Projects to be Evaluated

Base Period of the Task Order -- the Vendor will focus on the Rapid DNA Project (Task 1) and DHS Biometric Exit Pilots (Task 2). Option Period -- the Vendor will design the evaluation framework of the Mobile Biometrics Project (Task 3), upon option exercise. All projects are described in additional detail below:

SOW Task 1.0 until 11.4: Program Evaluation for Rapid DNA Project (Base Period -- Task 1)

United States Citizenship and Immigration Service (USCIS) currently uses fingerprints to check for any criminal history or immigration violations on benefit applicants, but these biometrics do not determine if persons are related to one another. However, DNA (deoxyribonucleic acid) does allow for the determination of family relationships since children receive half of their DNA from each parent. Until recently, however, it required a laboratory full of equipment and a highly trained forensic analyst to interpret the results. Sending a sample to a lab and waiting for it to be processed could take weeks to months at the cost of $300 to $400 per sample. Rapid and low-cost DNA processing permits efficiencies in the processing of valid applicants, reduces the costs associated with processing, deters fraud in applications and ultimately increases the number of legal immigrants admitted into the country.

Rapid and low-cost DNA processing may also prevent fraud and illegal profiteering with regard to kinship benefits. USCIS has identified the need for accurate DNA analysis to test kinship that would take less than one hour at a cost of under $100. This testing needs to be done in field locations, rather than at external labs, on a desktop-size device which is easy for the adjudicator to operate.

In 2008, a DNA screening pilot program that tested DNA for kinship of hundreds of cases involving family reunification in East Africa found that a considerable number of kinship claims were contradicted by DNA testing. Currently, DNA analysis to determine identity and kinship is not widely feasible because of cost and time considerations. With document fraud an increasing concern for USCIS adjudicators, a technology that could provide validation of family relationship rapidly and accurately while in the field would help ensure the efficacy of the process. The primary objective is to verify family relationships (kinship), but Rapid-DNA will also allow the identification of known criminals among those seeking asylum or immigration, verify relationships in overseas adoptions and provide for family reunification in mass-casualty situations. The initial target customer is USCIS Refugee, Asylum and International Operations Directorate.
SOW Task 2.0 until/2.2: Program Evaluation for DHS Biometric Exit Pilots
(Base Period—Task 2)

The future of U.S. immigration policy has been an issue of long discussion by officials in several Administrations, in the media, on Capitol Hill, and among the general public. Much of this discussion has focused on “overstays,” i.e., individuals who enter the United States lawfully, but who stay longer than their authorized period of admission. One of the most common reasons for denial of a U.S. visa is that the visa applicant fails to convince the U.S. consular officer that he or she will adhere to the admission period.

Establishing an effective Validated Exit program would allow DHS to meet its mission goals to protect the American public and enforce immigration laws. DHS currently faces a difficult decision for a Validated Exit system. Exit data collection is necessary to ensure that the Department knows who has not left on time, but there are varying opinions on how to best collect and track this information. Statutory mandates require DHS to implement a biometric exit program, however, it is unclear if previously conducted pilots and studies have answered questions necessary to formulate a long-term path forward regarding biometric exit and subsequently Validated Exit.

The objective of this effort is to work with DHS and contractor staff to aggregate all previous DHS evaluations of operational concepts for biometric exit, analyze available requirements, lead a methodological review to assess the validity of previous studies, and lead the design of research and pilot activities for candidate technologies to answer research questions necessary to inform a formulate a long-term path forward regarding biometric exit and subsequently Validated Exit. The initial target customer is senior DHS leadership.

SOW Task 3.0 until/3.3: Mobile Biometrics Project
(Option Period—Task 3 — 12 Months)

The Homeland Security Act of 2002 (Public Law 107-296) states that DHS S&T will “support basic and applied homeland security research to promote revolutionary changes in technologies; advance the development, testing and evaluation, and deployment of critical homeland security technologies; and accelerate the prototyping and deployment of technologies that will address homeland security vulnerabilities.” Pursuant to this mission, the Resilient Systems Division (RSD) of the Department of Homeland Security (DHS) Science and Technology Directorate recognizes the need for commercially available hand-held biometric acquisition devices that can effectively collect data samples from subjects under a variety of conditions. The DHS is responsible for the biometric identification of persons to achieve the statutory and regulatory missions of the components. To accomplish these tasks, DHS components require the ability to positively identify/screen individuals in a secure, efficient, accurate, and timely manner. This ability encompasses the collection, storage, transmission, and receipt of biometric and biographic data to support the component missions. The capability must be portable and operable in a wide variety of areas regardless of existing infrastructure (i.e., offshore, foreign, and remote locations, ports of entry, detention centers, etc) and conditions (i.e., day/night, arid/humid climates, hot/cold temperature extremes). The capability must also accommodate operators with varying levels of technical ability and subjects with varying levels of physical ability.
The output from these mobile acquisition devices must be usable for searches of large-scale biometric databases (1 to many) and or verification against a previously taken biometric sample (1 to 1). In order to assure maximum interoperability and efficiency of operation, DHS requires that the data output from these acquisition devices conform to pre-established standards.

This program focuses on the integration of various biometric modules into a single hand-held device or system. Modules may include but are not limited to: a four finger scan module for fingerprints, visible wavelength camera (with optional flash/illuminator) for face acquisition, and a near-infrared, dual iris capture camera. Additional biometric modules such as for voice and other technologies, such as card readers, etc., may be included in the final hand-held system. Multiple mobile devices currently are being piloted in the field among various component agencies as well as police departments throughout the country. Several police department have conducted independent evaluation prior to this SOW and will provide additional input into this evaluation process. The Vendor should be familiar with the U.S. National Institute of Standards and Technology (NIST) Mobile ID Device Best Practices Recommendation. Sept 2008 and should design a plan for evaluating the implementation of this device in the field. The plan should describe how the data capture methods, signal processing (image normalization, segmentation, feature extraction, quality assessment, template creation, output record formatting...), matching algorithms for each modality, decision for match/no-match and the accuracy of displayed results function when the device is operationally deployed and should assess how the device users employ the device and interpret the information it provides to what effect. The design should provide for the assessment of the strengths and weaknesses of the device as operated in the field and to the extent possible should determine the degree to which the availability of the new multimodal biometric tool improves on prior identification technologies.

IV. STAFFING

See Attachment 2: HSAR 3052.215-70 Key Personnel or Facilities (DEC 2003), which identifies Project Manager and Chief Technical Representative as Key Personnel.
## V. DELIVERABLES/MILESTONE PAYMENT SCHEDULE

<table>
<thead>
<tr>
<th>SOW Task</th>
<th>Deliverable</th>
<th>Description</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Project Management Plan</td>
<td>A project management plan that will accomplish the program's objectives as outlined by RSD personnel. The final version requires approval by the RSD Program Manager.</td>
<td>7 months from Date of Award Base Period Task 1 Submitted and paid</td>
</tr>
<tr>
<td>1.1</td>
<td>Draft of Data Collection Instruments</td>
<td>Draft of all data collection instruments. Final version requires approval by the RSD Program Manager.</td>
<td>3/10/2013</td>
</tr>
<tr>
<td>1.2</td>
<td>Evaluation Framework for Rapid DNA Project</td>
<td>A path forward for the program evaluation that is specifically tailored to the USCIS program and technology being evaluated. Final version requires approval by the RSD Program Manager.</td>
<td>6/15/2013</td>
</tr>
<tr>
<td>1.3</td>
<td>Summary of Data Collection Activities</td>
<td>A summary report of data collection activities and observations</td>
<td>8/31/2013</td>
</tr>
<tr>
<td>1.4</td>
<td>Final Report for Rapid DNA Project</td>
<td>A formal report that communicates the evaluation procedures and findings to relevant audiences. The length of the final report is anticipated to about 25 pages, including an executive summary of no more than two pages but excluding appendices, if any. The final version requires approval by the RSD Program Manager.</td>
<td>12/31/2013</td>
</tr>
<tr>
<td>2.0</td>
<td>Baseline Assessment for Biometric Exit Pilots</td>
<td>A summary of the previously conducted pilots as it stands. The Vendor will work with RSD to aggregate all previous DHS evaluations of operational concepts for biometric exit, and analyze available requirements.</td>
<td>3 months from Date of Award Base Period Task 2</td>
</tr>
<tr>
<td>2.1</td>
<td>Evaluation Framework for Biometric Exit Pilots</td>
<td>A methodological review to assess the validity of previous studies in answering research questions necessary to inform a DHS strategy for biometric exit</td>
<td>5 months from Date of Award Base Period Task 2</td>
</tr>
<tr>
<td>2.2</td>
<td>Final Report for Biometric Exit Pilots</td>
<td>A formal report that communicates a long-term path forward for the program evaluation that is specifically tailored to inform senior DHS leadership decisions. The length of the final report is anticipated to about 25 pages, including an executive summary of no more than two pages but excluding appendices, if any. The final version requires approval by the RSD Program Manager.</td>
<td>6 months from Date of Award Base Period Task 2</td>
</tr>
<tr>
<td>3.0</td>
<td>Baseline Assessment for Mobile Biometrics Project</td>
<td>A summary of the program as it stands. Final version requires approval by the RSD Program Manager</td>
<td>4 months from exercising Option Period Option Period Task 3</td>
</tr>
<tr>
<td>3.1</td>
<td>Evaluation Framework for Mobile Biometrics</td>
<td>A path forward for the program evaluation that is specifically tailored to the program and technology being evaluated. Final version requires approval by the RSD Program Manager.</td>
<td>6 months from exercising Option Period Option Period Task 3</td>
</tr>
<tr>
<td>3.2</td>
<td>Monitoring and Evaluation of Mobile Biometrics Project</td>
<td>Implementation and monitoring of the evaluation framework.</td>
<td>4 to 6 months from exercising Option Period Option Period Task 3</td>
</tr>
<tr>
<td>3.3</td>
<td>Final Report for Mobile Biometrics Project</td>
<td>A formal report that communicates the evaluation procedures and findings to relevant audiences. The length of the final report is anticipated to about 25 pages, including an executive summary of no more than two pages. The final version requires approval by the RSD Program Manager.</td>
<td>12 months from exercising Option Period Option Period Task 3</td>
</tr>
</tbody>
</table>
*Due to rounding, grand total at Firm Fixed Price is [0] (4)

* COFR shall determine, at his discretion, how long after receipt of the draft deliverable RTF has to deliver the final version and how long the Government will review the draft before providing comments.

VI. Other Task Order Details

1. Period of Performance. The base period of performance is from 14 September 2011 through 31 December 2013. If exercised, the option period of performance is 12 months from the option exercise date.

2. Travel. Domestic travel on the part of the Vendor's staff may be required in the performance of the duties that are listed herein. It is expected that the Vendor will reimburse non-government participants for those travel expenses that they might incur.

3. DHS-Furnished Information.
   a. DHS will provide certain DHS information, materials, and forms unique to DHS to the vendor to support certain tasks under this SOW.
   b. The DHS S&T Contracting Officer's Technical Representative, identified in this SOW, will be the point of contact (POC) for the identification of any required information to be supplied by DHS.
   c. The Vendor will prepare any documentation according to the guidelines provided by DHS.

4. Place of Performance. The Vendor will perform the work under this SOW at their place of business and the workshop location.

5. DHS-Furnished Property. DHS property will not be provided to the Vendor.

6. Deliverables. The Vendor will provide all deliverables identified in this SOW directly to the task-specific DHS S&T Technical Representatives and to the S&T Contracting Officer.
7. **Program Status Report.** The Vendor will deliver monthly program status reports. The

reports will be submitted on the 15th day of the month. The reports shall include the

following:

a. Summary of progress during the reporting period (including any significant technical

   information).

b. Unclassified technical or management problems of significance.

c. Problems anticipated in future reporting periods.

d. Summary of important meetings, briefings, trips and conferences during the period of

   the report and those planned in the following period.

All reports shall be submitted to the task-specific CORs and to the DHS S&T Contracting

Officer electronically.

8. **Funding Requirements.** DHS will provide funding that is outlined in the Task Order, at the

   discretion of the Government, subject to the availability of funds.

9. **Security Requirements.**

   a. All work performed under this SOW is unclassified unless otherwise specified by DHS.

   b. If classified work is required under this SOW, DHS will provide specific guidance to

      the Vendor as to which work will be conducted in a classified manner and at which

      classification level. The Vendor will also adhere to other applicable Government

      orders, guides, and directives pertaining to classified work. This SOW may require

      access to information at the unclassified level.

   c. The Contractor shall not publish, permit to be published, or distribute for public

      consumption, any information, oral or written, concerning the results or conclusions

      made pursuant to the performance of this Task Order, without the prior written consent

      of the Contracting Officer. An electronic or printed copy of any material proposed to be

      published or distributed shall be submitted to the Contracting Officer.

VII. **Points of Contact**

Contracting Officer:
Duane Schatz
Science and Technology Acquisitions Division
Office of Procurement Operations
Department of Homeland Security
Washington, DC 20582

Contracting Officer's Technical Representative (COTR):
Richard Legault
Resilient Systems Division
Science and Technology Directorate
Department of Homeland Security
Washington, DC 20582
**AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT**

<table>
<thead>
<tr>
<th>AMENDMENT/ MODIFICATION NO.</th>
<th>EFFECTIVE DATE</th>
<th>REQUISITION/PURCHASE REQ NO.</th>
<th>AMENDMENT OF SOLICITATION/MODIFICATION NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>P0003</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Solicitation Information**

U.S. Dept. of Homeland Security  
Office of Enforcement Operations  
S&T Acquisition Division  
245 Murray Line, NC  
Washington DC 20528-0015

**Contractor Information**

**Address:** Research Triangle Institute  
PO Box 1234  
Research Triangle Park NC 27709-1234

**Code:** R00000000

**Facility Code:** R00000000

**AMENDMENT-OF-SOLICITATION/MODIFICATION-OF-CONTRACT**

- **Contract No.:** RMF-13-0041
- **Date:** 17/14/2011

**This Item Only Applies to Amendments of Solicitations**

- The above-numbered solicitation is amended as set forth in Item 14. Effective date: 14 April 2013. Amended: Yes

**This Item Only Applies to Modifications of Contract/Offerer.**

- The above-numbered contract/offerer is modified to reflect the administrative changes (such as changes in funding office, point of contact, etc.) set forth in Item 14. Pursuant to the authority of FAR 43.108.

**Important:** Contractor is required to sign this document and return it to the issuing office.

**DUNS Number:** 004689105-0000

**Division/Program:** Human Factors/Behavioral Sciences Division

**Threat:** Personal Identification Systems

**Program:** Biometrics

**Project:** Biometrics

**Performance:** Research Triangle Institute (RTI)

**Project Manager:** Dr. Richard Leggott

**SETA:** Michael Cox

**Appropriation Year:** FY13 (R1 Funds)

**Notification Authority:** Reimbursable Funds

**Extended...**

- Exports provided to the buyer under the terms and conditions of the document referenced in Item 1A of this offer, and as such, are considered classified as government data.

- This offer is subject to the terms and conditions of the memorandum of understanding (MOU) referenced in Item 1A of this offer.

**AMENDMENT/ MODIFICATION NO.**

- **Date Signed:** June 25, 2013

**STANDARD FORM FOR MODIFICATION (Type 1, 2, 3)  
Prepared by:** GSA  
**FAR 43.108**
The purpose of this modification is to add and fully fund Task 4, increase the task order ceiling, and extend the period of performance through 30 June 2014, in accordance with the attached revised Statement of Work (SOW) (11 pages).

As a result of this action, the total obligated amount is increased by [redacted] from [redacted].

As a result, the task order ceiling is increased by [redacted] from [redacted].

All other terms and conditions remain unchanged.

AAP Number: N/A
DO/DPAS Rating: NONE
Delivery: 06/30/2014
Discount Terms: Net 30
Delivery Location Code: S&T MURRAY LANE
DHS S&T
245 Murray Lane
Building 410
Washington DC 20528

FOB: Destination
Period of Performance: 09/14/2011 to 06/30/2014

Add Item 1002 as follows:

1002 Task 4: TSA Personnel Evaluation
Statement of Work for Program Evaluations

U.S. Department of Homeland Security
Science & Technology Directorate
Resilient Systems Division
Biometrics

Task Order HSHQDC-11-F-00087 Modification P00003
PR No. RSHF-13-00041

This Statement of Work (SOW) outlines the activities that are involved in acquiring technical and consulting services in the social, behavioral, and economic sciences. These services will be responsible for addressing the methods, models and technologies to conduct program evaluations on biometric technologies within the Resilient Systems Division (RSD) of the Science & Technology Directorate (S&T).

1. BACKGROUND

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge science and technology in its quest to make America safer. The DHS S&T is tasked with advancing the scientific, engineering, and technological resources of the United States and leveraging these resources into tools to help protect the homeland. The Resilient Systems Division (RSD) applies the social and behavioral sciences in order to improve the detection, analysis, and understanding of threats posed by individuals, groups, and radical movements; to support the preparedness, response and recovery of communities impacted by catastrophic events; and to advance national security by integrating human factors into homeland security science and technologies.

The Quadrennial Homeland Security Review (2010) has identified Maturing and Strengthening the Homeland Security Enterprise (HSE) as a key DHS programmatic goal. DHS S&T provides those technologies, processes and expertise to the HSE in order to assist them in fulfilling their missions. However, DHS S&T has no formal, scientifically sound, program evaluation process to ensure that the mission is being met in a meaningful and efficient manner. Current S&T evaluation programs only test and consider the quality of the technology to be transitioned. A program evaluation approach that places a technology or other innovation within an operational context, and thus enables decision makers to assess the entire operational approach in which the technology or innovation is embedded, ultimately improving technology transition to the customer component agencies.

This SOW summarizes the work that is planned for program evaluations in DHS S&T. This work will be conducted through engaging the technology stakeholders, focusing the evaluation design on the technology and the purpose of the overall operational program; gathering and analyzing evidence; and producing a final report that will result in an improved program. Those lessons learned will help inform future DHS S&T program conceptualization and execution, and will lead to improvement in the quality and effectiveness of programs transitioned to customer component agencies.
II. SCOPE OF WORK

During the base period of performance, the Vendor will conduct program evaluations on the following DHS S&T programs: DHS Biometric Exit Pilots and the Rapid DNA project. In addition, there is an option for an evaluation of the Mobile Biometrics Project and an option for the evaluation of search capabilities for the Transportation Security Administration. The Vendor will develop and utilize a scientifically sound method to perform the following tasks:

- Identify and engage stakeholders;
- Determine evaluation needs;
- Develop measures of activities and outcomes;
- Identify, assess and gather data;
- Analyze the data;
- Reach operationally relevant conclusions; and
- Ensure the use and sharing of lessons learned.

Under this effort, the Vendor will be responsible for performing the following activities:

- Development of measures of progress;
- Assessment of the impact and effectiveness of the technology, performance, or innovation in the operational environment and identification of areas of improvement;
- Development of a baseline assessment of the operational program to inform the creation of an evaluation framework that is specifically tailored to the program, personnel performance or the technology being evaluated and;
- Preparation of a final report identifying lessons learned and provides both S&T and the operating agency with a road map for building on the evaluation’s results. The report will be provided to the program managers of the component agency, RSD, and other DHS stakeholders.

III. SPECIFIC TASKS

The specific tasks that are involved in the evaluation of DHS S&T technologies are provided in the following paragraphs:

Identify and Engage Stakeholders

In consultation with RSD, the Vendor will identify and engage relevant stakeholders. These include those involved in program operations, those served or affected by the program, and the primary users of the evaluation (those in a position to make decisions about the program). Stakeholders will be systematically identified in consultation with RSD. Stakeholders will have the purpose of the program evaluation explained to them, and how their participation in the process fits into the evaluation as a whole.

Description of the Program

The Vendor, in consultation with RSD, will specifically identify the purpose of the project and the research questions that it intends to address, with necessary special emphasis on the in-
practice implications of the technology, performance, or innovation on programmatic goals and objectives. The Vendor will then conduct a baseline assessment on the current program implementation or previously conducted pilots.

Focus Evaluation Design

The Vendor will then tailor the evaluation to the specific program and purpose of the evaluation. The Vendor will need to clarify who will use the evaluation results and how those results will be used. The Vendor will also consider the context of the program in order to determine the appropriate evaluation strategy that is best suited for the specific program. Where feasible and cost effective, the developed field experimental methods will be used by the Vendor, unless RSD approves another approach.

Identify, Assess, and Gather Data

As part of the design stage, the Vendor will responsible for the assessment of data needs and availability along with obstacles to and the necessary costs of data acquisition. The normal expectation from the Government is that both quantitative and qualitative data may be relevant to the conduct of an evaluation. Data of only one type will be used and collected if explained to the satisfaction of RSD. To keep costs low, data gathering by the Vendor will utilize existing program data to the extent feasible. To the extent that privacy and other rules permit, the data will be stored in a form that will allow the agency or S&T to reuse it in any follow-on or future work as appropriate without the payment of license or other fees.

Analyze Data and Reach Conclusions

After the data have been gathered, the Vendor will analyze the data using appropriate statistical and qualitative methods in order to assess program performance and to identify any gaps or weaknesses in or strengths of the technology as operationally applied. The Vendor will also be responsible for tying any conclusions to program standards of performance and to the extent there are weaknesses in the operational application of the technology or innovation, the Vendor will propose mitigation strategies.

Final Report

The Vendor will generate a final written report and provide any accompanying presentation slides that sets forth the research goals, explains the research strategies, describes the research design as implemented and the data used with a discussion of their strengths and limitations, reports the methods and results of the analysis, including where appropriate, tables, key statistical outputs or other information summaries and recommendations for actions in the form of a final report. The report will also include a brief executive summary and, if appropriate, statistical tables, summaries of the qualitative data or other appendices. The copyright for the report will be held by DHS.

This report will be made available to the program manager(s) of the component agency and to RSD. Any additional dissemination of the report will be made at the discretion of RSD.
basis for the recommendations, their rationales and the data behind them will be explained by the Vendor to the responsible program manager(s) and any relevant stakeholders or other potential users that have been identified by the program manager. Up to five such briefings of up to 90 minutes in length may be requested by RSD.

Projects to be Evaluated

Base Period of the Task Order -- the Vendor will focus on the Rapid DNA Project (Task 1) and DHS Biometric Exit Pilots (Task 2). Option Period 1-- the Vendor will design the evaluation framework of the Mobile Biometrics Project (Task 3), upon option exercise. Option Period 2-- the Vendor will design the evaluation framework of the TSA Personnel Evaluation Project (Task 4), upon option exercise. All projects are described in additional detail below:

SOW Task 1.0 until/1.4: Program Evaluation for Rapid DNA Project
(Base Period-- Task 1)

United States Citizenship and Immigration Service (USCIS) currently uses fingerprints to check for any criminal history or immigration violations on benefit applicants, but these biometrics do not determine if persons are related to one another. However, DNA (deoxyribonucleic acid) does allow for the determination of family relationships since children receive half of their DNA from each parent. Until recently, however, it required a laboratory full of equipment and a highly trained forensic analyst to interpret the results. Sending a sample to a lab and waiting for it to be processed could take weeks to months at the cost of $300 to $400 per sample. Rapid and low-cost DNA processing permits efficiencies in the processing of valid applicants, reduces the costs associated with processing, deters fraud in applications, and ultimately increases the number of legal immigrants admitted into the country.

Rapid and low-cost DNA processing may also prevent fraud and illegal profiteering with regard to kinship benefits. USCIS has identified the need for accurate DNA analysis to test kinship that would take less than one hour at a cost of under $100. This testing needs to be done in field locations, rather than at external labs, on a desktop-size device which is easy for the adjudicator to operate.

In 2008, a DNA screening pilot program that tested DNA for kinship of hundreds of cases involving family reunification in East Africa found that a considerable number of kinship claims were contradicted by DNA testing. Currently, DNA analysis to determine identity and kinship is not widely feasible because of cost and time considerations. With document fraud an increasing concern for USCIS adjudicators, a technology that could provide validation of family relationship rapidly and accurately while in the field would help ensure the efficacy of the process. The primary objective is to verify family relationships (kinship), but Rapid-DNA will also allow the identification of known criminals among those seeking asylum or immigration, verify relationships in overseas adoptions and provide for family reunification in mass-casualty situations. The initial target customer is USCIS Refugee, Asylum and International Operations Directorate.
SOW Task 2.0 until/2.2: Program Evaluation for DHS Biometric Exit Pilots
(Base Period -- Task 2)

The future of U.S. immigration policy has been an issue of long discussion by officials in several Administrations, in the media, on Capitol Hill, and among the general public. Much of this discussion has focused on "overstays," i.e. individuals who enter the United States lawfully, but who stay longer than their authorized period of admission. One of the most common reasons for denial of a U.S. visa is that the visa applicant fails to convince the U.S. consular officer that he or she will adhere to the admission period.

Establishing an effective Validated Exit program would allow DHS to meet its mission goals to protect the American public and enforce immigration laws. DHS currently faces a difficult decision for a Validated Exit system. Exit data collection is necessary to ensure that the Department knows who has not left on time, but there are varying opinions on how to best collect and track this information. Statutory mandates require DHS to implement a biometric exit program; however, it is unclear if previously conducted pilots and studies have answered questions necessary to formulate a long-term path forward regarding biometric exit and subsequently Validated Exit.

The objective of this effort is to work with DHS and contractor staff to aggregate all previous DHS evaluations of operational concepts for biometric exit, analyze available requirements, lead a methodological review to assess the validity of previous studies, and lead the design of research and pilot activities for candidate technologies to answer research questions necessary to inform a formulate a long-term path forward regarding biometric exit and subsequently Validated Exit. The initial target customer is senior DHS leadership.

SOW Task 3.0 until/3.3: Mobile Biometrics Project
(Option Period 1 -- Task 3 -- 12 Months)

The Homeland Security Act of 2002 (Public Law 107-296) states that DHS S&T will "support basic and applied homeland security research to promote revolutionary changes in technologies: advance the development, testing and evaluation, and deployment of critical homeland security technologies; and accelerate the prototyping and deployment of technologies that would address homeland security vulnerabilities." Pursuant to this mission, the Resilient Systems Division (RSD) of the Department of Homeland Security (DHS) Science and Technology Directorate recognizes the need for commercially available hand-held biometric acquisition devices that can effectively collect data samples from subjects under a variety of conditions. The DHS is responsible for the biometric identification of persons to achieve the statutory and regulatory missions of the components. To accomplish these tasks, DHS components require the ability to positively identify/screen individuals in a secure, efficient, accurate, and timely manner. This ability encompasses the collection, storage, transmission, and receipt of biometric and biographic data to support the component missions. The capability must be portable and operable in a wide variety of areas regardless of existing infrastructure (i.e. offshore, foreign and remote locations, ports of entry, detention centers, etc) and conditions (i.e. day/night, arid/humid climates, hot/cold temperature extremes). The capability must also accommodate operators with varying levels of technical ability and subjects with varying levels of physical ability.
The output from these mobile acquisition devices must be usable for searches of large-scale biometric databases (1 to many) and verification against a previously taken biometric sample (1 to 1). In order to assure maximum interoperability and efficiency of operation, DHS requires that the data output from these acquisition devices conform to pre-established standards.

This program focuses on the integration of various biometric modules into a single hand-held device or system. Modules may include but are not limited to: a four finger slap module for fingerprints, visible wavelength camera (with optional flash/illuminator) for face acquisition, and a near-infrared, dual iris capture camera. Additional biometric modules such as for voice and other technologies, such as card readers, etc. may be included in the final hand-held system.

Multiple mobile devices currently are being piloted in the field among various component agencies as well as police departments throughout the country. Several police departments have conducted independent evaluation prior to this SOW and will provide additional input into this evaluation process. The Vendor should be familiar with the U.S. National Institute of Standards and Technology (NIST) Mobile ID Device Best Practices Recommendation, Sept 2008 report and should design a plan for evaluating the implementation of this device in the field. The plan should describe how the data capture methods, signal processing (image normalization, segmentation, feature extraction, quality assessment, template creation, output record formatting...), matching algorithms for each modality, decision for match/no-match and the accuracy of displayed results function when the device is operationally deployed and should assess how the device users employ the device and interpret the information it provides to what effect. The design should provide for the assessment of the strengths and weaknesses of the device as operated in the field and to the extent possible should determine the degree to which the availability of the new multimodal biometric tool improves on prior identification technologies.

SOW Task 4.0 until 4.6: TSA Personnel Evaluation
(Option Period 2 -- Task 4 -- 12 Months)

The goal of this work is to enhance TSA OSO's existing Officer Performance Studies project in three areas through evaluation. These areas will improve aviation security, improve the efficiency and effectiveness of TSA's officer performance studies, improve TSA's officer training programs, and improve TSA's standard operating procedures at airport checkpoints. First, examine possible benefits of remote screening – having TSA X-ray operators perform searches away from the terminal (There are current conversations and debates with DHS and TSA about the cost and benefits of having TSA Officers work remotely. This task will examine whether performance is better or worse when conducted remotely). Second, enhance the assessment and training of specific search strategies employed by TSA Officers when conducting X-ray screening (This task will assess search strategies used by different TSOs to see if some styles are more effective than others and will determine whether effective strategies can be retained). Thirdly, determine the impact on threat detection performance of specific hotel or briefing information provided by Superiors (This task will help determine on how best to inform TSA Officers of newly discovered threats so as to improve overall performance).

IV. STAFFING

See Attachment 2 - HSR 3052.015-70 Key Personnel or Facilities (DEC 2003), which identifies Project Manager and Chief Technical Representative as Key Personnel.
## V. DELIVERABLES/MILESTONE PAYMENT SCHEDULE

<table>
<thead>
<tr>
<th>SOW Task</th>
<th>Deliverable</th>
<th>Description</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Project Management Plan</td>
<td>A project management plan that will accomplish the program’s objectives as outlined by RSD personnel. The final version requires approval by the RSD Program Manager.</td>
<td>7 months from Date of Award Base Period Task 1 Submitted and paid</td>
</tr>
<tr>
<td>1.1</td>
<td>Draft of Data Collection Instruments</td>
<td>Draft of all data collection instruments. Final version requires approval by the RSD Program Manager.</td>
<td>3/10/2013</td>
</tr>
<tr>
<td>1.2</td>
<td>Evaluation Framework for Rapid DNA Project</td>
<td>A path forward for the program evaluation that is specifically tailored to the USCIS program and technology being evaluated. Final version requires approval by the RSD Program Manager.</td>
<td>6/15/2013</td>
</tr>
<tr>
<td>1.3</td>
<td>Summary of Data Collection Activities</td>
<td>A summary report of data collection activities and observations</td>
<td>8/31/2013</td>
</tr>
<tr>
<td>1.4</td>
<td>Final Report for Rapid DNA Project</td>
<td>A formal report that communicates the evaluation procedures and findings to relevant audiences. The length of the final report is anticipated to be about 25 pages, including an executive summary of no more than two pages but excluding appendices, if any. The final version requires approval by the RSD Program Manager.</td>
<td>12/31/2012</td>
</tr>
<tr>
<td>2.0</td>
<td>Baseline Assessment for Biometric Exit Pilots</td>
<td>A summary of the previously conducted pilots as it stands. The Vendor will work with RSD to aggregate all previous DHS evaluations of operational concepts for biometric exit, and analyze available requirements.</td>
<td>3 months from Date of Award Base Period Task 2</td>
</tr>
<tr>
<td>2.1</td>
<td>Evaluation Framework for Biometric Exit Pilots</td>
<td>A methodological review to assess the validity of previous studies in answering research questions necessary to inform a DHS strategy for biometric exit</td>
<td>5 months from Date of Award Base Period Task 2</td>
</tr>
<tr>
<td>2.2</td>
<td>Final Report for Biometric Exit Pilots</td>
<td>A formal report that communicates a long-term path forward for the program evaluation that is specifically tailored to inform senior DHS leadership decisions. The length of the final report is anticipated to be about 25 pages, including an executive summary of no more than two pages but excluding appendices, if any. The final version requires approval by the RSD Program Manager.</td>
<td>6 months from Date of Award Base Period Task 2</td>
</tr>
<tr>
<td>3.0</td>
<td>Baseline Assessment for Mobile Biometrics Project</td>
<td>A summary of the program as it stands. Final version requires approval by the RSD Program Manager.</td>
<td>4 months from exercising Option Period Option Period Task 3</td>
</tr>
<tr>
<td>3.1</td>
<td>Evaluation Framework for Mobile Biometrics</td>
<td>A path forward for the program evaluation that is specifically tailored to the program and technology being evaluated. Final version requires approval by the RSD Program Manager.</td>
<td>6 months from exercising Option Period Option Period Task 3</td>
</tr>
<tr>
<td>3.2</td>
<td>Monitoring and Evaluation of Mobile Biometrics Project</td>
<td>Implementation and monitoring of the evaluation framework.</td>
<td>4 to 5 months from exercising Option Period Option Period Task 3</td>
</tr>
<tr>
<td>3.3</td>
<td>Final Report for Mobile Biometrics Project</td>
<td>A formal report that communicates the evaluation procedures and findings to relevant audiences. The length of the final report is anticipated to be about 25 pages, including an executive summary of no more than two pages. The final version requires approval by the RSD Program Manager.</td>
<td>12 months from exercising Option Period Option Period Task 3</td>
</tr>
<tr>
<td>4.0</td>
<td>Project Management Plan</td>
<td>A project management plan that will accomplish the program's objectives as outlined by RSD personnel. The final version requires approval by the RSD Program Manager.</td>
<td>1 month from exercising Option Period. Option Period Task 4</td>
</tr>
<tr>
<td>-----</td>
<td>-------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>4.1</td>
<td>Prepare Experiments</td>
<td>A plan forward for the personnel performance evaluation that is specifically tailored to the areas being evaluated. Final version requires approval by the RSD Program Manager.</td>
<td>3 months from exercising Option Period. Option Period Task 4</td>
</tr>
<tr>
<td>4.2</td>
<td>Test Subjects</td>
<td>Implementation and monitoring of the evaluation framework. Collect and analyze data.</td>
<td>11 months from exercising Option Period. Option Period Task 4</td>
</tr>
<tr>
<td>4.3</td>
<td>Prepare manuscript/presentations</td>
<td>Manuscripts and publications for both scientific audiences (where appropriate) and RSD stakeholders that communicates the evaluation procedures and findings to relevant audiences. The final versions require approval by the RSD Program Manager.</td>
<td>12 months from exercising Option Period. Option Period Task 4</td>
</tr>
<tr>
<td>4.4</td>
<td>Quarterly Reports</td>
<td>Quarterly report formats will be approved as part of the PMP (Task 4.0) but will, at a minimum, include budget expenditure and task progress.</td>
<td>3, 6, &amp; 9 months from exercising Option Period. Option Period Task 4</td>
</tr>
<tr>
<td>4.5</td>
<td>Draft Final Reports</td>
<td>A draft version of a final report that communicates the evaluation procedures and findings to relevant audiences.</td>
<td>11 months from exercising Option Period. Option Period Task 4</td>
</tr>
<tr>
<td>4.6</td>
<td>Final Reports</td>
<td>A formal report that communicates the evaluation procedures and findings to relevant audiences. The final version requires approval by the RSD Program Manager.</td>
<td>12 months from exercising Option Period. Option Period Task 4</td>
</tr>
</tbody>
</table>
VI. Other Task Order Details

1. **Period of Performance.** The task order period of performance is from 14 September 2011 through 30 June 2014. If exercised, the period of performance for each option period is 12 months from the option exercise date.

2. **Travel.** Domestic travel on the part of the Vendor's staff may be required in the performance of the duties that are listed herein. It is expected that the Vendor will reimburse non-government participants for those travel expenses that they might incur.

3. **DHS-Furnished Information.**
   a. DHS will provide certain DHS information, materials, and forms unique to DHS to the vendor to support certain tasks under this SOW.
   b. The DHS S&T Contracting Officer's Technical Representative, identified in this SOW, will be the point of contact (POC) for the identification of any required information to be supplied by DHS.
   c. The Vendor will prepare any documentation according to the guidelines provided by DHS.

4. **Place of Performance.** The Vendor will perform the work under this SOW at their place of business and the workshop location.

5. **DHS-Furnished Property.** DHS property will not be provided to the Vendor.

6. **Deliverables.** The Vendor will provide all deliverables identified in this SOW directly to the task-specific DHS S&T Technical Representatives and to the S&T Contracting Officer.
7. **Program Status Report.** The Vendor will deliver monthly program status reports. The reports will be submitted on the 15th day of the month. The reports shall include the following:

   a. Summary of progress during the reporting period (including any significant technical information).
   b. Unanticipated technical or management problems of significance.
   c. Problems anticipated in future reporting periods.
   d. Summary of important meetings, briefings, trips and conferences during the period of the report and those planned in the following period.

   All reports shall be submitted to the task-specific COTRs and to the DHS S&T Contracting Officer electronically.

8. **Funding Requirements.** DHS will provide funding that is outlined in the Task Order, at the discretion of the Government, subject to the availability of funds.

9. **Security Requirements.**

   a. All work performed under this SOW is unclassified unless otherwise specified by DHS.
   b. If classified work is required under this SOW, DHS will provide specific guidance to the Vendor as to which work will be conducted in a classified manner and at which classification level. The Vendor will also adhere to other applicable Government orders, guides, and directives pertaining to classified work. This SOW may require access to information at the unclassified level.
   c. The Contractor shall not publish, permit to be published, or distribute for public consumption, any information, oral or written, concerning the results or conclusions made pursuant to the performance of this Task Order, without the prior written consent of the Contracting Officer. An electronic or printed copy of any material proposed to be published or distributed shall be submitted to the Contracting Officer.

VII. **Points of Contact**

   **Contracting Officer:**
   Duane Schatz
   Science and Technology Acquisitions Division
   Office of Procurement Operations
   Department of Homeland Security
   Washington, DC 20582

   **Contracting Officer's Technical Representative (COTR):**
   Richard Legault
   Resilient Systems Division
   Science and Technology Directorate
   Department of Homeland Security
   Washington, DC 20582
DHS S&T Invoicing:
U.S. DHS, ICE
Attn: S&T RSD Invoice
Burlington Finance Center
P.O. Box 1000
Williston, VT 05495-1000
invoicesat.consolidation@ice.dhs.gov
**AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT**

**CONTRACT NO.**

**AMOUNT AVAILABLE/AMOUNT MODIFIED**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**

**CONTRACT NO.**

**DATE MODIFIED**

**CONTRACT OR ORDER MODIFIED**
The purpose of this modification is to add and
fully fund Task 5 and increase the task order
celling, in accordance with the attached revised
Statement of Work (SOW) (21 pages).

As a result of this action, the total obligated
amount is increased by [604] from

As a result, the task order ceiling is increased
by [604] from [604] to

All other terms and conditions remain unchanged.
AAR Number: N/A CG/WAS Rating: NONE
Delivery: 07/21/2015
Discount Terms:
Net: 30
Delivery Location Code: S&T MURRAY LANE
DHS S&T
245 Murray Lane
Building 410
Washington DC 20528

FOB: Destination
Period of Performance: 09/14/2014 to 01/31/2015

Add Item 1003 as follows:

1003 Task 5: CHMRG Standards for First Responders
Statement of Work for Program Evaluations

U.S. Department of Homeland Security
Science & Technology Directorate
Resilient Systems Division
Biometrics

Task Order HSHQDC-11-F-00087 Modification P00004
PR No. RSST-13-00032

This Statement of Work (SOW) outlines the activities that are involved in acquiring technical and consulting services in the social, behavioral, and economic sciences. These services will be responsible for addressing the methods, models and technologies to conduct program evaluations on biometric technologies within the Resilient Systems Division (RSD) of the Science & Technology Directorate (S&T).

I. BACKGROUND

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge science and technology in its quest to make America safer. The DHS S&T is tasked with advancing the scientific, engineering, and technological resources of the United States and leveraging these resources into tools to help protect the homeland. The Resilient Systems Division (RSD) applies the social and behavioral sciences in order to improve the detection, analysis, and understanding of threats posed by individuals, groups, and radical movements; to support the preparedness, response and recovery of communities impacted by catastrophic events; and to advance national security by integrating human factors into homeland security science and technologies.

The Quadrennial Homeland Security Review (2010) has identified Maturing and Strengthening the Homeland Security Enterprise (HSE) as a key DHS programmatic goal. DHS S&T provides those technologies, processes and expertise to the HSE in order to assist them in fulfilling their missions. However, DHS S&T has no formal, scientifically sound, program evaluation process to ensure that the mission is being met in a meaningful and efficient manner. Current S&T evaluation programs only test and consider the quality of the technology to be transitioned. A program evaluation approach that places a technology or other innovation within an operational context and thus enables decision makers to assess the entire operational approach in which the technology or innovation is embedded, ultimately improving technology transition to the customer component agencies.

This SOW summarizes the work that is planned for program evaluations in DHS S&T. This work will be conducted through engaging the technology stakeholders, focusing the evaluation design on the technology and the purpose of the overall operational program, gathering and analyzing evidence, and producing a final report that will result in an improved program. Those lessons learned will help inform future DHS S&T program conceptualization and execution, and will lead to improvement in the quality and effectiveness of programs transitioned to customer component agencies.
II. SCOPE OF WORK

During the base period of performance, the Vendor will conduct program evaluations on the following DHS S&T programs: DHS Biometric Exit Pilots and the Rapid DNA project. In addition, there is an option for an evaluation of the Mobile Biometrics Project, an option for the evaluation of search capabilities for the Transportation Security Administration and an option for an evidence-based evaluation of Chemical, Biological, Radiological, Nuclear and Explosives (CBRNE) Standards for First Responders. The Vendor will develop and utilize a scientifically sound method to perform the following tasks:

- Identify and engage stakeholders;
- Determine evaluation needs;
- Develop measures of activities and outcomes;
- Identify, assess and gather data;
- Analyze the data;
- Reach operationally relevant conclusions; and
- Ensure the use and sharing of lessons learned.

Under this effort, the Vendor will be responsible for performing the following activities:

- Development of measures of progress;
- Assessment of the impact and effectiveness of the technology, performance, or innovation in the operational environment and identification of areas of improvement;
- Development of a baseline assessment of the operational program to inform the creation of an evaluation framework that is specifically tailored to the program, personnel performance or the technology being evaluated and;
- Preparation of a final report identifying lessons learned and provides both S&T and the operating agency with a road map for building on the evaluation's results. The report will be provided to the program managers of the component agency, RSD, and other DHS stakeholders.

III. SPECIFIC TASKS

The specific tasks that are involved in the evaluation of DHS S&T technologies are provided in the following paragraphs:

Identify and Engage Stakeholders

In consultation with RSD, the Vendor will identify and engage relevant stakeholders. These include those involved in program operations, those served or affected by the program, and the primary users of the evaluation (those in a position to make decisions about the program). Stakeholders will be systematically identified in conjunction with RSD. Stakeholders will have the purpose of the program evaluation explained to them, and how their participation in the process fits into the evaluation as a whole.
Description of the Program

The Vendor, in consultation with RSD, will specifically identify the purpose of the project and the research questions that it intends to address, with necessary special emphasis on the in-practice implications of the technology, performance, or innovation on programmatic goals and objectives. The Vendor will then conduct a baseline assessment on the current program implementation or previously conducted pilots.

Focus Evaluation Design

The Vendor will then tailor the evaluation to the specific program and purpose of the evaluation. The Vendor will need to clarify who will use the evaluation results, and how those results will be used. The Vendor will also consider the context of the program in order to determine the appropriate evaluation strategy that is best suited for the specific program. Where feasible and cost effective, the developed field experimental methods will be used by the Vendor, unless RSD approves another approach.

Identify. Assess. and Gather Data

As part of the design stage, the Vendor will responsible for the assessment of data needs and availability along with obstacles to and the necessary costs of data acquisition. The normal expectation from the Government is that both quantitative and qualitative data may be relevant to the conduct of an evaluation. Data of only one type will be used and collected if explained to the satisfaction of RSD. To keep costs low, data gathering by the Vendor will utilize existing program data to the extent feasible. To the extent that privacy and other rules permit, the data will be stored in a form that will allow the agency or S&T to reuse it in any follow-on or future work as appropriate without the payment of license or other fees.

Analyze Data and Reach Conclusions

After the data have been gathered, the Vendor will analyze the data using appropriate statistical and qualitative methods in order to assess program performance and to identify any gaps or weaknesses in or strengths of the technology as operationally applied. The Vendor will also be responsible for tying any conclusions to program standards of performance and to the extent there are weaknesses in the operational application of the technology or innovation, the Vendor will propose mitigation strategies.

Final Report

The Vendor will generate a final written report and provide any accompanying presentation slides, that sets forth the research goals, explains the research strategies, describes the research design as implemented and the data used with a discussion of their strengths and limitations, reports the methods and results of the analysis, including, where appropriate, tables, key statistical outputs or other information summaries and recommendations for actions in the form of a final report. The report will also include a brief executive summary and, if appropriate, statistical tables, summaries of the qualitative data or other appendices. The copyright for the report will be held by DHS.
This report will be made available to the program manager(s) of the component agency and to RSD. Any additional dissemination of the report will be made at the discretion of RSD. The basis for the recommendations, their rationales and the data behind them will be explained by the Vendor to the responsible program manager(s) and any relevant stakeholders or other potential users that have been identified by the program manager. Up to five such briefings of up to 90 minutes in length may be requested by RSD.

Projects to be Evaluated

Base Period of the Task Order -- the Vendor will focus on the Rapid DNA Project (Task 1) and DHS Biometric Exit Pilots (Task 2). Option Period 1 -- the Vendor will design the evaluation framework of the Mobile Biometrics Project (Task 3), upon option exercise. Option Period 2 -- the Vendor will design the evaluation framework of the TSA Personnel Evaluation Project (Task 4), upon option exercise. Optional Task 5 -- the Vendor will design the evaluation framework of the CBRNE Standards for First Responders project (Task 5). All projects are described in additional detail below:

SOW Task 1.0 until 1.4: Program Evaluation for Rapid DNA Project (Base Period -- Task 1)

United States Citizenship and Immigration Service (USCIS) currently uses fingerprints to check for any criminal history or immigration violations on benefit applicants, but these biometrics do not determine if persons are related to one another. However, DNA (deoxyribonucleic acid) does allow for the determination of family relationships since children receive half of their DNA from each parent. Until recently, however, it required a laboratory full of equipment and a highly trained forensic analyst to interpret the results. Sending a sample to a lab and waiting for it to be processed could take weeks to months at the cost of $300 to $400 per sample. Rapid and low-cost DNA processing permits efficiencies in the processing of valid applicants, reduces the costs associated with processing, deters fraud in applications, and ultimately increases the number of legal immigrants admitted into the country.

Rapid and low-cost DNA processing may also prevent fraud and illegal profiteering with regard to kinship benefits. USCIS has identified the need for accurate DNA analysis to test kinship that would take less than one hour at a cost of under $100. This testing needs to be done in field locations, rather than at external labs, on a desktop-size device which is easy for the adjudicator to operate.

In 2008, a DNA screening pilot program that tested DNA for kinship of hundreds of cases involving family reunification in East Africa found that a considerable number of kinship claims were contradicted by DNA testing. Currently, DNA analysis to determine identity and kinship is not widely feasible because of cost and time considerations. With document fraud an increasing concern for USCIS adjudicators, a technology that could provide validation of family relationship rapidly and accurately while in the field would help ensure the efficacy of the process. The primary objective is to verify family relationships (kinship), but Rapid-DNA will also allow the identification of known criminals among those seeking asylum or immigration, verify relationships in overseas adoptions, and provide for family reunification in mass-casualty situations. The initial target customer is USCIS Refugee, Asylum and International Operations Directorate.