I-Catalyst Program - NCEZID Rapid Digitized Mapping

GenIC Submission under OMB #0920-1158

Juliana K. Cyril, MPH, PhD
Director, Office of Technology and Innovation
Office of the Associate Director for Science
Centers for Disease Control and Prevention
Ph: 404-639-4639
Fax: 404-639-4903

Team Lead – Rebecca Merrill, NCEZID

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- The goal of this project is to solicit qualitative information from specific stakeholder groups that will be utilized internally by the International Borders Team (IBT), Division of Global Migration and Quarantine, to facilitate and advance IBT's efforts toward improving the capacity of partner countries to more efficiently gather and visualize community-level information on population movement patterns.

- The collected information will be used for internal decision-making purposes and to provide suggestions for improving development of a tool to rapidly digitize participatory mapping data in low-resource setting. Information gathered will be used by IBT to make more informed decisions about the solution and will help the team determine if their initial ideas about a solution will be beneficial to the end-user or not.

A. Justification

1. Circumstances Making the Collection of Information Necessary

During many sizeable humanitarian and public health crises, organizations have offered a variety of Global Information Systems (GIS) support to partners in low-resource settings to inform targeted response efforts. Despite the clear need for mapping resources, many low-resource areas or smaller events have insufficient GIS expertise and spatial data development and rely on the support to create timely maps. The Division of Global Migration and Quarantine's International Border Team (IBT) collaborates with partner countries to build their capacity to gather and visualize community-level information on population movement patterns and to interpret the results for preparedness and response activities. Through these partnerships, IBT understands that partners have the required basic to intermediate GIS skills to produce maps of their existing health data, but they lack the advanced skills required to develop efficient data collection strategies and to geo-reference and digitize data annotated on paper maps. Consequently, host country partners rely on IBT to adapt tools and to convert their participatory mapping data to useful output. Therefore, IBT seeks to identify a low-cost, easy-to-use solution to enable host-country partners to more rapidly and independently create mapping data to inform their understanding of at risk communities based on population movement patterns. With this innovation, host-countries will improve their capacity to more efficiently mitigate the geographic impact of communicable disease without relying on IBT's continued involvement.

Federal scientific agencies, like the CDC, rely on research and findings through public health surveillance, epidemiologic assessments, and evaluations to help them develop solutions to public health problems which ultimately are disseminated to end-users and stakeholders for adoption and use. However, anecdotal and empirical data show that many well-meaning, robust solutions are never used or adopted by the intended end-user. One reason for this is that very often federal agencies make assumptions about what our end-users want and need. Through a "customer discovery" process, IBT will explore who their end-user is, the exact problem they are trying to solve for the end-user, and how the end-user wants to receive or use the solution from the team —which the team will then further explore mainly through interviews with likely end-users. The information collection is necessary to create usable solutions that are end-user centric and meaningful to users.

Therefore, to succeed in building host-country capacity to process this GIS-related data in a variety of limited infrastructure environments, IBT seeks to first talk with our ministry of health partners to better understand the end-user, the problem, and the appropriate solutions. Ultimately, the team aims to develop an innovative, low-resource approach to facilitate the conversion of field-based, GIS-related data annotated on paper maps into a database that partners can visualize using freely available mapping software.

The International Borders Team (IBT) requests OMB approval in this GenIC to explore whether the ministry of health surveillance unit leads will use a rapid digitized tool to more efficiently allocate public health resources to at risk communities during an outbreak response. The effort is authorized under Section 301 of the Public Health Service Act 42 U.S.C.241.

2. Purpose and Use of Information Collection

The CDC I-Catalyst program guides participants through a "customer discovery" process aimed at helping teams with a new solution to identify their customers. This is done by taking a team's main assumptions about who their customer is, the exact problem they are solving for the customer, and how the customer wants to receive or use the solution from the team—and turning those assumptions into hypotheses which the teams will then test (mainly through interviews with potential customers). Only conversations with potential customers (stakeholders) can provide the facts from which hypotheses are proven or disproven about whether a solution (product, process, etc.) creates value for the intended beneficiaries. It is expected that participants will leave the program with the ability to evaluate and translate their insights into solutions that have high levels of efficacy

and user acceptability. The information collection is necessary to guide CDC project teams to create usable solutions that are customer centric and meaningful to users, whether it's adhering to recommendations, policies, protocol or interventions.

The goal of this project, which is nested within the I-Catalyst training program, is to solicit qualitative information from specific stakeholder groups that will be utilized internally by IBT to facilitate and advance IBT's efforts toward improving the capacity of partner countries to more efficiently gather and visualize community-level information on population movement patterns.

The collected information will be used for internal decision-making purposes and to provide suggestions for improving development of a tool to rapidly digitize participatory mapping data in low-resource setting. Information gathered will be used by IBT to make more informed decisions about the solution and will help the team determine if their initial ideas about a solution will be beneficial to the end-user or not. The customer interviews will be conducted with International Health Regulations National Focal Points (IHR NFP), public health surveillance officers at the national, district, and local levels, emergency management officials, health education specialists, medical staff, and immigration and security officers. IBT will also select colleagues within CDC who are involved in international activities related to diseases that often cross international borders, such as tuberculosis and anthrax.

3. Use of Improved Information Technology and Burden Reduction

The interviews will be conducted in person, on-site or by virtual video conferencing like Skype for Business or Adobe Connect (Att. 1 – Interview guide). Using formative interview protocols allows the interviewer to follow the respondent's lead during in-person conversations. This wouldn't be possible if a list of fixed questions were used. This also is not possible if automated, technological-based collection techniques, such as a web-based survey, are used. On-site, in-person interviews allow interviewers to establish rapport with respondents and produce visual cues for interpreting responses that may require further probing or clarification. However, there are instances where teams can use improved information technology such as Skype or video conferencing for interviews to reduce the burden and provide flexibility in responder's schedule.

4. Efforts to Identify Duplication and Use of Similar Information

This is a unique I-Catalyst project and a new proposed solution. Other than proprietary business databases, there is no existing database that can provide the level of detail about the customer experiences, wants, and needs necessary for NCEZID to understand need and use of spatial mapping during preparedness and response activities and how to ensure health recommendations are met before international travel.

5. Impact on Small Businesses or Other Small Entities

No small businesses will be involved in this project.

6. Consequences of Collecting the Information Less Frequently

Data is collected once at this stage in the discovery process, respondents will participate in an interview once lasting no more than 30 minutes.

7. Special Circumstances Relating to the Guidelines of 5 CFR 1320.5

This request fully complies with the regulation 5 CFR 1320.5. There are no special circumstances.

8. Comments in Response to the Federal Register Notice and Efforts to Consult Outside the Agency

Not Applicable

9. Explanation of Any Payment or Gift to Respondents

There is no exchange of payment or gifts to respondents for the voluntary interviews.

10. Assurance of Confidentiality Provided to Respondents

Activities for this request do not involve the collection of Individually Identifiable Information.

11. Justification for Sensitive Questions

There are no sensitive data items to be asked of individual respondents. CDC Human Research Protection Office determined that data /IC is not research involving human subjects and IRB is not required - OADS Project Determination approval.

12. Estimates of Annualized Burden Hours and Costs

The project team will interview 50 respondents for this ICR. The project will interview for an average of 30 minutes and maximum of 1 responses per respondent. Annualized burden will be 25 hours and an estimated annualized burden cost of $692.50.

Estimated Annualized Burden Hours

Table A: Estimated Annualized Burden Hours

Type of Respondents	Form Name	No. of Respondents	No. of Responses per Respondent	Avg. Burden per Response (in hrs.)	Total Burden (in hrs.)
Public health surveillance, preparedness, immigration and security officers	Interview Guide	50	1	30/60	25
Total					**25**

Table B: Estimated Annualized Burden Costs

Type of Respondents	Form Name	No. of Respondents	No. of Responses per Respondent	Avg. Burden per Response (in hrs.)	Total Burden (in hrs.)	Hourly Wage Rate*	Total Respondent Costs
Public health surveillance, preparedness, immigration and security officers	Interview Guide	50	1	30/60	25	Average 27.70	$692.50
							$ 692.50

*Average of hourly wage from http://www.bls.gov/home.htm

13. Estimates of Other Total Annual Cost Burden to Respondents or Record Keepers

There are no projected cost burdens for reporting.

14. Annualized Cost to the Government

a. The project cost is associated with the CDC project team members responsible for conducting the interviews. These figures were estimated as the sum of the anticipated direct labor; fringe and burden on direct labor.

Project Staff Oversight	**Annual Cost**
CDC Cost: Health Scientist (5% of Time)	$5,000.00
CDC Cost: PH Advisor (2% of Time)	$1,420.00

Total	**$6,420.00**

15. Explanation for Program Changes or Adjustments

This information collection request is a new submission.

16. Plans for Tabulation and Publication and Project Time Schedule

The proposed interviews will be conducted within 3-6 months after approval of GenIC. Interim reports will be developed, which will incorporate data collected from these sources in 2017 and 2018.

17. Reason(s) Display of OMB Expiration Date is Inappropriate

The display of the OMB expiration date is not inappropriate.

18. Exceptions to Certification for Paperwork Reduction Act Submissions

There are no exceptions to the certification statement.