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GLOBAL CAPACITY STRENGTHENING STRATEGY

THE DEMOGRAPHIC AND HEALTH SURVEY PROGRAM

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The DHS Program assists countries worldwide in the collection and use of data to monitor and evaluate population, health, and nutrition programs. For additional information about The DHS Program contact DHS Program, ICF International, 530 Gaither Road, Suite 500, Rockville, MD 20850, USA; phone: 301-407-6500, fax: 301-407-6501, e-mail: reports@dhsprogram.com, Internet: www.dhsprogram.com.

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ACRONYMS

AIS	AIDS Indicator Survey
CAT	Capacity Assessment Tool
CSS	Capacity Strengthening Strategy
DCAF	DHS Capacity Assessment Facilitator
DHS	Demographic and Health Survey
GIS	Geographic Information System
GPS	Global Positioning System
HICD	Human and Institutional Capacity Development
MIS	Malaria Indicator Survey
MOH	Ministry of Health
NGO	Non-Governmental Organization
NSO	National Statistical Office
SPA	Service Provision Assessment
TOT	Training of Trainers

I INTRODUCTION

For the past 30 years, the USAID funded The Demographic and Health Survey (DHS) Program, in partnership with host-country implementing institutions and other donor organizations, has provided technical assistance for more than 300 surveys in 90+ countries. The program has a long standing reputation for providing technical leadership in data collection, analysis, dissemination and capacity building. Additionally, the DHS Program has facilitated the use of credible and reliable data for planning and policymaking as well as program management worldwide. The DHS team has a proven business model and the human resources capacity that allow it to plan, monitor, and manage surveys in 30 to 40 countries at the same time. The Program has developed strong partnerships over the years and has secured expertise in every aspect of the DHS continuum. Led by ICF International, the project has seven subcontractors, namely Johns Hopkins Bloomberg School of Public Health Center for Communication Programs (CCP), PATH, Vysnova Partners, Blue Raster, Futures Institute, EnCompass, and Kimetrica.

In 2013, USAID awarded ICF the seventh five-year contract of the DHS program. Under this new DHS-7 contract, strengthening the capacity of host countries to implement The DHS Program suite of household and facility-based surveys, namely the DHS, AIS, MIS and the SPA surveys and disseminate and use the results in country, is an explicit and critical focus.

Accordingly, this document—The DHS Program’s Global Capacity Strengthening Strategy (CSS)—has been developed to help guide, monitor and evaluate The DHS Program’s capacity strengthening efforts aimed at increasing country ownership and helping to reduce host-country dependence on foreign technical assistance for conducting surveys. The document is organized into four main parts:

1. Goals, vision, and overall approach
2. Main capacity strengthening strategy components: Global and country levels
3. Performance solutions
4. Capacity strengthening implementation plan

2 GOALS, VISION, AND OVERALL APPROACH

2.1 GOALS AND VISION

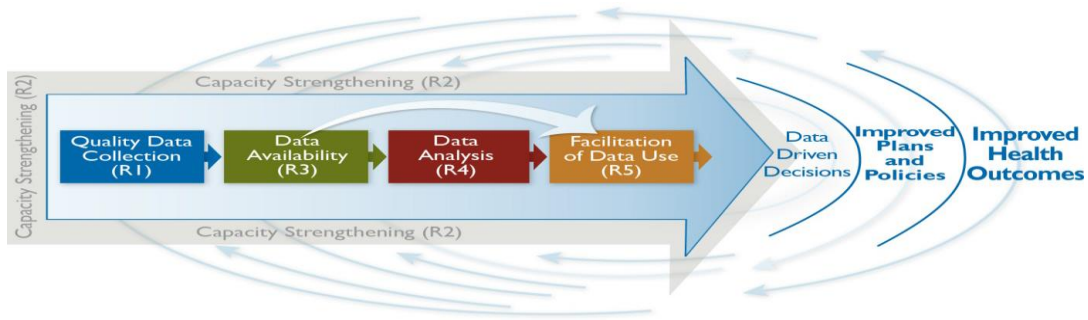
The DHS Program's Global Capacity Strengthening Strategy (CSS) aims to enhance the capacity of DHS host-country partners to plan, implement, analyze, disseminate and use DHS, AIS, MIS and SPA surveys. Its goal is to help narrow capacity gaps by equipping host-country partners with necessary tools and resources and enhancing skills and knowledge. It is hoped that as a result of a sustained capacity strengthening strategy, particularly in select countries, country ownership and accountability will increase, there will be increased commitment and emphasis at the country level on quality, analysis, and use of data, and a gradual reduction in dependence on foreign technical assistance for routine data collection.

Improving the quality of data collection, access and use creates a powerful opportunity for achieving better health outcomes (Exhibit 1). Building on the extensive achievements of the prior rounds of The DHS Program in terms of capacity strengthened and knowledge disseminated, the CSS will serve as the framework for providing technical assistance for upcoming surveys under the DHS-7 contract. The CSS implementation will not just help to realize Result 2 below, but will also contribute to the attainment of the other four results required under the contract:

- **Result 1** - Improved tools, methods, partnerships, and technical guidance to collect quality population, health, and nutrition data
- **Result 2** - Increased in-country individual and institutional capacity for identification of data needs and for survey design and management, data collection, data analysis, and information communication to meet those needs
- **Result 3** - Improved availability of data and information
- **Result 4** - Advanced analysis and synthesis of DHS Data
- **Result 5** - Improved global and country-level interpretation and increased application of DHS data to facilitate use

Exhibit 1 portrays the DHS-7 results to be achieved and highlights that by its very nature and definition, Result 2 supports implementation of all other DHS results.

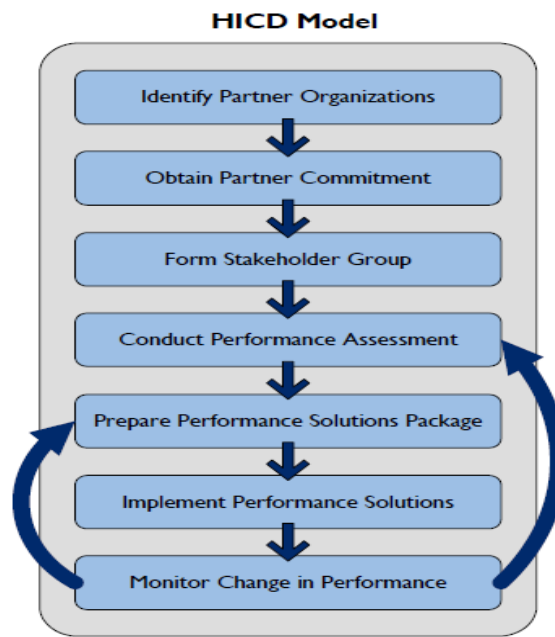
Exhibit 1: DHS-7 Goals: Interactions and Objectives



2.2 OVERALL APPROACH

The overall approach of the DHS CSS is based on the *whole-systems approach* of USAID's Human and Institutional Capacity Development (HCID) model illustrated below in Exhibit 2. Recognizing that individual performance is highly influenced by institutional context, the DHS program will provide technical assistance in a holistic manner, while ensuring that the capacities of counterparts are strengthened during survey design, implementation, processing, analysis, dissemination, monitoring, and evaluation. This will require commitment, as well as close collaboration with partner institutions and stakeholders. Each phase of the DHS survey continuum is aligned with the steps in the HCID framework. In fact, DHS's approach is based on the principle that in order to implement good surveys and obtain quality demographic and health data, the program must work jointly with stakeholders to (1) identify an implementing organization to implement the survey, (2) obtain commitment from key stakeholders and secure resources, (3) form a survey steering committee to provide guidance, (4) design and implement performance assessment tools, (5) design and implement performance solutions, (6) monitor performance and document results to improve subsequent survey rounds.

Exhibit 2: Human and Institutional Capacity Development



Stakeholders play a critical role in the success of a DHS survey. Their involvement and ownership of the process is paramount in ensuring sustainable institutional capacity strengthening at the country level. The DHS already strategically engages stakeholders at various levels of the survey structure according to their roles and interests (see Exhibit 3) to ensure their buy-in, and will now more explicitly garner their investment in country capacity strengthening.

The CSS will be characterized by three main principles as follows:

- **Strategic approach that is focused on results:**
 - Implement capacity strengthening activities in a way that is synergistic to survey work, i.e. enhancing quality and not compromising timeliness.
 - Focus capacity strengthening plans and activities on desired outcomes at individual and organizational levels, and measure their achievement both for learning and improvement, as well as for accountability.
 - Incorporate feedback and monitoring of the organization’s impact, and use this feedback to improve offerings and for reporting.

Exhibit 3: The Key Stakeholders for DHS-7 CSS Process

Level	Stakeholder	Interest/Role
Country	Government Policy Makers	Users of data
	Ministries of Health	Users of data
	Other ministries	Users of data
	Survey Committees (Steering, Technical and Financial)	Users of data
	Statistical Office	Implementer of most surveys
	National Research Community	Users of data
Individual	Local NGO Community	Users of data
	Policy Makers	Users of data
	Survey and Statistics Specialists	Survey implementers/Users of data
	Researchers	Users of data
Global/ Regional	USAID	Donor/user of data
	Other funders	Donor/user of data
	Health Community (Policy & Research)	User of data
	Other Research Community	User of data

- **Emphasis on country capacity and country ownership**
 - Focus plan to address capacity needs at organizational and individual levels, and adopt a holistic approach in supporting implementing agencies as a whole to conduct the DHS suite of surveys rather than maximizing efforts on isolated activities.
 - Build capacity plans based on a collaborative assessment of institutional capacities and the needs of the implementing organization(s) and obtain mutual commitment to, and responsibility for, the success of those plans.
 - Support comprehensive, systematic capacity strengthening plans for focus countries that transfer ownership of responsibilities to countries for a series of survey activities with an emphasis on both quality and sustainability.
 - Promote country-to-country exchanges and learning.
- **Appreciative, participant-centered, experiential learning**
 - Capacity strengthening activities and workshops will build on what has worked well in the past
 - Learning experiences will take into account the learner’s existing knowledge, assumptions, and context.
 - Learning activities will fit into a larger program of capacity strengthening, including considerations for how participants will be supported after a particular capacity strengthening process has ended.
 - All DHS facilitators—staff, consultants, counterparts—will be provided with selected Training of Trainer competencies and support in order to improve the overall ability of facilitators to be more effective in transferring skills and knowledge.

3 MAIN STRATEGY COMPONENTS

The main components of the CSS strategy include efforts at a global level to create mutual commitments to strengthening survey capacity across donors, updating capacity strengthening materials, and creating global platforms for accessing these materials.

3.1 GLOBAL LEVEL

3.1.1 Structure

To ensure both the capacity strengthening expertise and the survey expertise, two structures will be used to guide and implement the CSS:

- **A cross-function DHS team:** This team, led by the Senior Capacity Strengthening Advisor, and comprising DHS survey and topic experts, will undertake the implementation of the CSS.
- **A Reference Group:** We will identify up to five members, including DHS headquarters staff and a selection of country-level stakeholders who will serve as informal advisors to the capacity strengthening team.

3.1.2 Key Activities

Key activities at the global level fall into two main categories: (1) development and management of the CSS, and (2) refinement, strengthening and making more accessible capacity building tools, curricula, etc.

Developing and Managing the Capacity Strengthening Strategy

- Designing, implementing, monitoring and evaluating the CSS and its component parts, including collecting and reviewing evaluations and incorporating lessons and decisions about the CSS. DHS will select a set of indicators to use to track progress toward key outputs and lessons learned. Since emphasis will be placed on the roll-out of the CSS during the first year, we will begin assessment activities in the year 2.
- Developing and implementing a plan to enhance the capacity of DHS core staff and consultants; this entails developing and implementing a staff skills assessment and using the results to address capacity gaps.
- Developing a CSS knowledge management plan that serves primarily DHS headquarters staff and that integrates communication and M&E functions to support DHS Program goals. This entails the production of evidence-based narratives, and the creation, storage, retrieval, transfer and application of DHS experiences, insights, best practices, tools and other products for USAID, local partners, and other stakeholders.

Refining, Strengthening, and Making More Accessible Capacity Building Tools, Curricula

We will conduct desk reviews of relevant survey materials and tools and will either refine them or develop new materials. We will make them available to counterparts of countries where DHS provides technical assistance. This process will include:

- Conducting an inventory of current, relevant DHS materials to identify gaps in capacity building tools and curricula.
- **Developing, testing and disseminating templates and learning products** to be used by countries in implementing their capacity strengthening plans including:
 - Development of country capacity assessment tool
 - Development of country capacity strengthening plan template
 - Development of CSS Performance Solutions (package)
 - Revising existing curricula and developing new curricula for selected training programs
 - Developing training effectiveness assessment tools
- Designing E-learning programs

3.2 COUNTRY LEVEL

The most important level for DHS capacity strengthening activities is the country level. It is at this level that DHS works directly with local implementing organizations (LIAs) to carry out either household or facility-based surveys successfully. These LIAs can be quasi-governmental entities, governmental institutions or private organizations with their own priorities, commitments, and survey-related capacities. In addition, DHS/SPA capacity requires many different types of skill sets and expertise along the continuum of the survey process. Successful implementation of DHS's capacity strengthening strategy will thus depend on several factors:

- A country's priorities and needs with respect to DHS and DHS-related capacity, and the country's commitment to developing such capacity
- A country's DHS capacity assets and ability to manage those assets
- A country's existing resources including availability of funds for capacity strengthening activities
- Whether or not a country is a "focus country." Focus countries are countries with more than one survey to be implemented over the span of DHS-7 and where there is Mission and local commitment to sustaining capacity building activities.

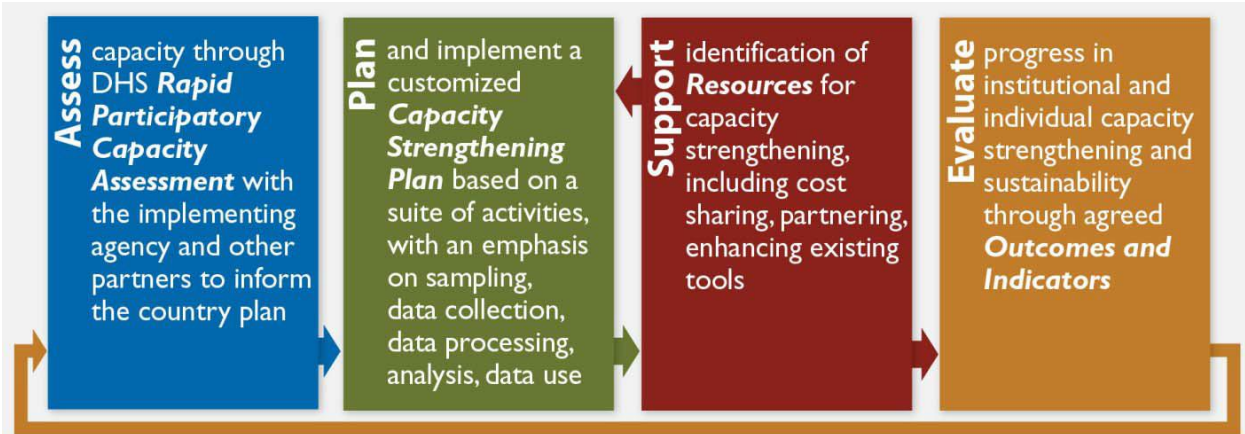
Given the range of countries in which DHS will be working, two types of country strategies will be pursued: one strategy in DHS focus countries and another in other countries. The main difference between these two strategies is the intensiveness of the planning and support as shown below:

Capacity Strengthening Activities	Focus Countries	Non-Focus Countries
Capacity Assessment	Comprehensive use of the CAT	Rapid CAT process (if requested by Mission)
Country Capacity Strengthening Plan	Full plan development- if requested by Mission and based on availability of funds	Only if requested by Mission and based on availability of funds
Performance Solutions Packages	(1) Core DHS Package (2) Strategic DHS Package (including the three-stage model and TOT) (3) Optional DHS Package	(1) Core DHS Package (2) Optional DHS Package by request
Other	(1) Resource mobilization support for capacity strengthening (2) M&E (3) Distance Learning	Distance Learning

3.2.1 DHS Focus Countries

As experience from prior DHS projects has shown, developing a DHS capacity is not a one-time activity, but a process. DHS envisions proposing five countries as potential DHS focus countries. The initial list includes Nepal, Senegal, Rwanda, Tanzania, and Ghana with the option of replacing one or more with other countries if a selected country shows very low or no interest in investing in capacity strengthening activities. Focus countries are those countries that have the opportunity to organize and carry out multiple surveys, or conduct continuous surveys, and therefore DHS has the opportunity to undertake and reinforce the capacity implementation over time. These focus countries will receive more intensive capacity strengthening interventions as well as tools to document incremental changes in their capacity based on agreed upon outcomes. Our overall methodology in “focus countries” is laid out in Exhibit 4.

Exhibit 4: CSS Process in Focus Countries



As illustrated in Exhibit 4, DHS will work closely with local partners and will implement the following activities in DHS surveys in the focus countries (once the CSS has been approved by USAID):

- Carry out a *comprehensive* participatory capacity strengthening needs assessment using the electronic *Capacity Assessment Tool (CAT)* in partnership with implementing agencies, country counterparts, and local experts to identify performance gaps at both institutional and individual levels. The CAT will be implemented at several stages over the course of DHS-7: during the planning process for each survey, and again at the end of each survey.
- Develop and implement a tailor-made *country-specific capacity strengthening plan* to bridge the gap between actual and desired performance. This plan will also include metrics (as illustrated in the capacity assessment tool in Annex 1).
- Support resource mobilization for capacity strengthening activities: This applies to instances where implementing agencies have no or limited financial resources and need guidance and support in identifying and securing additional funding to implement DHS survey and capacity strengthening activities.
- Develop and implement *Performance Solutions Packages* (described in more detail in Section 4) including (1) *Core DHS Package*, (2) *Strategic DHS Package*, and (3) *Optional DHS Package*: Specific packages will be offered depending on a country's interest and ability to secure required resources such as supplemental funding for capacity strengthening. Each package will equip implementing organizations with strategies for increasing performance and reaching desired optimal outcomes.
- Develop and implement an *M&E system* for tracking and monitoring the performance improvements as an ongoing process alongside the technical improvements. If an M&E plan exists, develop capacity strengthening indicators to be integrated into the M&E plan.

3.2.2 Non-Focus Countries

In non-focus countries, where only a single DHS survey is taking place under DHS-7, The DHS Program will provide, at the request of countries, the following activities:

- Implementation of an electronic *rapid capacity needs assessment* during the planning process for each survey in order to identify capacity gaps. This will typically be done in partnership with implementing agencies and local counterparts to determine capacity strengthening opportunities.
- Development and implementation of a basic capacity strengthening plan depending on availability of funds. We will ensure that capacity is strengthened by developing and jointly implementing assessment tools during questionnaire pretest and main training to monitor trainees' performance. We envision using a variety of tools to assess performance prior to, during and post training. For example, a simple pre- and post-test can provide information on the effectiveness of the training and the type of skills enhanced. DHS will seek to

measure the impact of training programs up to at least level one of *Kirkpatrick's*¹ four levels of evaluation, which is an evidence-based tool for measuring training effectiveness.

- Collaboratively implement *performance solutions packages* (see Section 4) including (1) *Core DHS Package*; (2) *Optional DHS Package* depending on the country's interest and available funding for capacity strengthening.

3.2.3 Capacity Assessment Tool (CAT)

In order to target CSS activities, propose appropriate performance solutions, and measure progress, we will design and implement an electronic capacity assessment tool to be used to jointly assess implementing organizations' readiness to conduct household or facility-based surveys. While the CAT is suitable for all countries, in "non-focus countries" that implement a DHS every five years it will be implemented only at the request of those countries at the beginning of survey design to get a sense of the capacity level. For "focus countries" on the other hand, it will be systematically implemented as a means to determine a baseline, develop a capacity strengthening plan, and measure progress made over time.

Objectives of the CAT: The objective of the CAT is to assess the capacity of implementing agencies to conduct demographic and health surveys following international standards of quality and methodological soundness. The CAT will help to identify and quantify performance gaps along the survey continuum in order to guide resource allocation decisions for capacity building. Using the information from the CAT, implementing organizations will be able to think through and plan the capacity they need to carry out and sustain meaningful improvements in implementing the DHS suite of surveys. The CAT is a user-friendly tool that can be implemented electronically or printed out on paper and filled in.

Description of the CAT: The CAT is comprised of 12 modules covering competencies along the DHS survey continuum (see box at right).

The CAT uses a scoring system to assess the level of capacity for each task or activity, on a 1 to 4 point scale (see box below). The CAT will afford agencies with the ability to conduct an initial assessment, to gauge its current state, and to identify and prioritize capacity needs.

The CAT will be used to assess progress over time in capacity strengthening. In practice it will involve an initial assessment, conducted ideally at the start of the survey process, to determine which stage an implementing agency is at. Based on the outcomes of this first assessment with the CAT, DHS will develop a capacity strengthening plan to enhance the implementing agency's capacities and enable it to move from its current level to a higher level.

CAT Modules:

- (1) Survey management and planning
- (2) Sampling
- (3) Questionnaire design and testing
- (4) Field staffing and training
- (5) Field operations
- (6) Data processing
- (7) Report writing
- (8) Laboratory testing
- (9) GIS
- (10) Data analysis
- (11) Data dissemination
- (12) Institutional capacity

¹ Donald Kirkpatrick's (1959) four levels of evaluation -an evidence-based tool for measuring training effectiveness- is a sequential model designed to help trainers objectively evaluate training programs

The Scoring System:

- 1 The implementing organization has very little capacity: Counterpart has only minimal or no capacity to conduct the activity and needs technical assistance for all elements of the activity, including getting organized to conduct the activity, implementing it and managing it. This is typically the case when capacity for particular functions is very low or non-existent.
- 2 The implementing organization can participate in the activity: Counterpart can undertake the straightforward elements of key functions but needs a high level of supervision and guidance through technical assistance. The activity will still need to be carried out and managed mainly by The DHS Surveys Program staff.
- 3 The implementing organization is capable of carrying out this activity with technical assistance: Counterpart has the capacity to take prime responsibility for the activity, can handle most of the complex aspects of the activity and knows when they need to ask for assistance. The role of technical assistance is mostly to provide support and oversight, and fill-in where there are any remaining gaps in capacity, and provide extra guidance and support mostly for the development of new materials, and handling of new, infrequent or unforeseen situations.
- 4 The implementing organization is capable of carrying out this activity at appropriate level of quality on its own: Counterpart is now fully competent to satisfactorily undertake and complete the whole function. They may still use an international expert for highly technical work or for validation, advice or oversight, but do not need assistance in carrying out any aspect of the activity.

The capacity continuum for independent survey implementation can be viewed as a three stage process, each stage with its own level of capacity strengthening activities. Countries will be deemed at:

- Stage I if the implementing agency receives a mean score < 70% in 6 (i.e., half) modules of the CAT.
- Stage II if the implementing agency receives a mean score between 70-90% in 8 (i.e., two thirds) modules of the CAT.
- Stage III if the implementing agency receives a mean score between 90-100% in all twelve modules of the CAT.

Each subsequent capacity assessment after the initial one will show whether a country has made progress in closing identified capacity gaps and if they have moved from one stage to the next. For any one survey cycle, the first assessment will be done at the start of the survey cycle, generally to coincide with the first or second visit, and the second assessment will generally take place during the DHS dissemination workshop visit. Countries can move from one stage to the next. However, given the large number of capacity gaps to be worked on with the implementing organization, the process is likely to be gradual and it may take an implementing agency multiple survey rounds to move from one stage to the next. A lot will also depend on the involved agencies retention of staff that are trained and their commitment to capacity development. Countries identified through repeated CATs as ready to move from Stage II to III will receive capacity strengthening support through continuous mentoring and coaching from DHS experts in targeted technical areas.

Initial Implementation of the CAT: The CAT will be implemented through a two-part participatory process, with a self-assessment by the implementing agency, followed by an assessment by partners. The tool will be disseminated and filled in electronically (via email),

although it may be printed and administered onsite. The ideal timeframe for implementing the CAT will be during the initial phase of the survey process, such as the survey design visit or the very next visit, allowing time to develop the capacity strengthening plan.

Self-assessment by the implementing agency will be done by disseminating the appropriate CAT modules to the different teams within the implementing agency (based on their level of involvement in activities). For assessment by partners, DHS staff will administer the tool and will collect the results from partners. The DHS Senior Capacity Strengthening Advisor will then analyze and compare the results of both the self-assessment and the partner assessment, conduct a capacity gap analysis, and develop a capacity strengthening plan based on the outcomes of the capacity assessment. The capacity strengthening plan will mainly focus on addressing capacity gaps for the modules that receive the lowest mean scores and then within the modules, on those specific competencies with the lowest scores. This plan will then be presented at an in-country stakeholders' meeting, upon approval from both the USAID mission and the implementing agency, to gain buy-in and raise funds to support the implementation of capacity strengthening activities.

In summary, the final CAT instrument after pilot testing, will be designed to determine where a country sits along the survey capacity continuum, and what might be needed to move it from its current level of capacity to a higher level. The focus of the CAT is to help identify and prioritize capacity gaps and not to determine whether and how much technical assistance is needed. Even countries at the highest stage are likely to continue to require capacity strengthening in some areas and technical assistance for some specialized or new tasks. Capacity strengthening is a long process, and success will depend on organizational commitment to CS activities and on whether or not the implementing agency is experiencing high staff turnover - which would set back progress made in survey capacity.

At this time the CAT has been pilot tested in two DHS focus countries and revised. The results of the pilot can be found in the capacity assessment tool report.

4 PERFORMANCE SOLUTIONS

DHS will design, implement, and disseminate performance solutions to implementing agencies at country level to help them meet their capacity development needs. The performance solutions will be selected and implemented in as consultative a way as possible to promote accountability, commitment, and ownership. Since funding for all aspects of a DHS survey is determined early, discussions about available financial resources to support capacity strengthening activities will be held as early as possible to ensure successful implementation of the capacity strengthening strategies. We will develop tools for partners to use to set benchmarks and measure increased capacity both at individual and institutional levels. Such tools will include the capacity assessment tool and the progress report, which will clearly outline the achievements and milestones in capacity development over a period of time (as depicted in Exhibit 5).

Exhibit 5: Sample Progress Report

Function/ Work Task	Starting level of capacity—survey phase 1 (date)	Level of capacity at completion of survey phase 1 (date)	Level of capacity at completion of survey phase 2 (date)
	1	2	3
Develop survey plans for staffing needs, types of skills required and time when staff are needed	Organization has very limited capacity, so the activity needs to be carried out primarily by DHS	Organization is able to participate in the activity but the activity needs to be led by DHS	Organization is capable of carrying out this activity with technical assistance

DHS will be developing/refining a series of performance solution packages to meet the needs of both focus and non-focus countries. These include:

- Core package: This package includes all capacity strengthening activities routinely offered by DHS to host countries.
- Strategic package: This package is implemented in three stages and includes a two-tiered questionnaire pretest training. It is suitable for DHS focus countries.
- Optional package: this package is designed to meet counterparts' needs for further capacity strengthening on particular technical areas. It provides a menu of activities for them to choose from to strengthen specific technical competencies.
- Continuous capacity strengthening: This is a set of harmonized distance learning courses for selected technical topics that The DHS Program will provide to counterparts using a core

online platform (e.g., Webex, Adobe Connect, Moodle) to reinforce in-country capacity strengthening activities.

4.1 CORE DHS CAPACITY STRENGTHENING PACKAGE

The DHS Program core capacity strengthening package includes all capacity strengthening activities routinely offered by the DHS Program to host countries. It is best suited for implementing organizations that conduct DHS/SPA surveys once every five years or so. This package will aim at equipping partners with core competencies required for successfully carrying out the survey. A rapid capacity assessment will be offered as part of the package to assess the capacity gaps of implementing agencies prior and at the end of the survey. Implementing agencies that choose this package will receive significant face-to-face technical assistance from DHS headquarters staff to ensure that capacities are enhanced and desired outcomes are attained. The DHS core package includes the following key capacity strengthening components:

- **Refined field staff training infused with innovative training approaches**
DHS will seek to refine its training program, tools and materials based on a participatory approach. Specifically, we will revise the interviewer training manual and redesign and implement training sessions according to standard training guidelines. This will involve designing training curricula to reinforce the appropriate use of participatory training methods and making DHS training more engaging. We will develop and implement assessment tools to monitor trainees' performance. We envision using a variety of tools to assess performance prior to, during and post training. For example, a simple pre and post-test will be administered to gather information on the effectiveness of the training and the type of skills enhanced. We will refine existing training assessment tools or design and implement new ones to measure what counterparts have learned and how much their knowledge has increased as a result of our trainings. The overall training methodology will help foster the acquisition and/or reinforcement of knowledge and skills required for participants to collect quality survey data.
- **Survey institutional capacity**
This aspect refers to the implementing agency's preparedness to carry out a survey, namely its physical, human, and technical capacity. It is also critical to increase sustainability and country ownership. Through twinning, the DHS Program staff train and mentor survey managers, samplers, interviewers, field supervisors, data processors, health technicians, laboratory staff, and communications specialists in every phase of the survey process. The DHS Program will assist counterparts in putting in place required systems, structures and guidelines for implementing the survey and for carrying out core functions such as survey design, planning, implementation and management. Survey related tools, standard operating procedures, and other resources will be developed and made available for counterparts to adapt to their own programs. DHS's efforts in this category will contribute to incrementally strengthening institutional capacity in the key areas outlined in Exhibit 6.

Exhibit 6: Key Institutional Capacities

Key capacities that need to exist in local institutions to be able to conduct DHS surveys without DHS support.

Survey Design	
<input checked="" type="checkbox"/> Identify scope of work (key indicators at national, regional and district levels) <input checked="" type="checkbox"/> Set up a financial management system to manage survey funds <input checked="" type="checkbox"/> Plan and secure adequate survey infrastructure and human resources capacity <input checked="" type="checkbox"/> Create a logistical plan for survey equipment and supplies <input checked="" type="checkbox"/> Set up data processing systems and processes <input checked="" type="checkbox"/> Set up Laboratory and laboratory training <input checked="" type="checkbox"/> Establish survey committees (to provide guidance throughout the process)	
Survey Planning, Implementation and Management	
<input checked="" type="checkbox"/> Questionnaire design <input checked="" type="checkbox"/> Sampling <input checked="" type="checkbox"/> Mapping and household listing <input checked="" type="checkbox"/> Pretest training <input checked="" type="checkbox"/> Main training- including CAPI/CAFE and biomarkers training	<input checked="" type="checkbox"/> Fieldwork supervision <input checked="" type="checkbox"/> Data processing <input checked="" type="checkbox"/> Tabulation <input checked="" type="checkbox"/> Preliminary report <input checked="" type="checkbox"/> Report writing workshops <input checked="" type="checkbox"/> Survey dissemination and data use
Tools, Equipment and Resources	
<input checked="" type="checkbox"/> Standardized Training Curricula (TOT materials i.e., facilitator's guide, participant manual & users training materials)	<input checked="" type="checkbox"/> Equipment <input checked="" type="checkbox"/> Standardized Training Impact Assessment Tools <input checked="" type="checkbox"/> Standard operating procedures (SOPs)

4.2 STRATEGIC SURVEY TRAINING PACKAGE

This package will offer everything in the core package, plus a two-tiered pretest training for countries that are in stage II. The strategic survey training package, however, will be implemented in three stages. It is appropriate for implementing organizations that carry out DHS continuous surveys or multiple surveys as it will offer opportunities for counterparts to practice and apply DHS skills once developed. The goal will be to ensure that critical aspects of DHS capacity are enhanced incrementally and in a sustainable manner. We will also conduct a capacity gap analysis both at the beginning as well as at the end of each survey using the CAT tool to highlight progress made and to ensure that international standards of quality and methodological soundness are met. A set of performance improvement metrics will be used to assess progress made by organizations and to move them from Stage I to Stage II then Stage III (described below). This will enable implementing organizations to determine additional interventions required for addressing technical competencies to ensure smooth transfer of critical aspects of the survey. In practice, this scenario will look like this:

Stage I – An implementing agency will be in Stage I, if it receives a mean score < 70% in 6 (i.e. half) modules of the CAT during their evaluation. This indicates that the implementing agency has very limited capacity to carry out a DHS survey on its own. It will, therefore, require extensive involvement of DHS staff and/or consultants to ensure that the agency's capacities in survey planning and management are enhanced and that data collection is done following international standards of quality and methodological soundness. In this case, a capacity strengthening plan will be developed and will include strategies aimed at strengthening competencies for all modules that received the lowest scores. DHS will work closely with the

implementing agency to jointly carry out the survey. During this stage, all activities included in the core package will be led by DHS staff. The Capacity Assessment Tool will be implemented. This second assessment will take place at the conclusion of the survey to measure progress, preferably during the DHS dissemination workshop visit. If all identified capacity gaps have been closed, the country will move to Stage II.

Stage II – An implementing agency will be in Stage II, if it receives a mean score between 70-90% in 8 (i.e. two thirds) modules of the Capacity Assessment Tool during their evaluation. This also indicates that the implementing agency is able to carry out most of the functional activities with technical assistance. Counterparts are expected to demonstrate advanced skills in conducting functional activities and take on more responsibilities in survey planning, implementation and management following international standards of quality and methodological soundness. They will receive support from DHS staff and/or consultants through supportive supervision, mentoring and coaching as they conduct those functional activities as co-facilitators. In this case, the capacity strengthening plan will include strategies aimed at strengthening skills, knowledge and abilities for the modules that received the lowest scores. The implementing agency will advance to Stage III, once it has improved identified capacity gaps in Stage II and has received a mean score between 90-100% in all twelve modules. Another capacity assessment will be performed at the conclusion of the survey or after a year (in the case of continuous survey) to confirm this progress. Counterparts in this stage are expected to take on a leadership role in most aspects of the survey listed in Exhibit 7.

Exhibit 7: Stage II Competencies (in addition to Stage I)

Survey Design	
<input checked="" type="checkbox"/> Identify scope of work (key indicators at national, regional and district levels) <input checked="" type="checkbox"/> Set up an efficient financial management system to manage DHS survey funds <input checked="" type="checkbox"/> Plan and secure an adequate survey staff and infrastructure capacity <input checked="" type="checkbox"/> Adapt data processing programs with appropriate level of quality <input checked="" type="checkbox"/> Set up a survey committee to provide guidance throughout the process	
Survey Planning, Implementation and Management	
<input checked="" type="checkbox"/> Co-facilitate pretest trainings <input checked="" type="checkbox"/> Lead main trainings <input checked="" type="checkbox"/> Co-facilitate aspects of trainings on portable electronic devices for data collection such as Computer Assisted Personal Interviewing (CAPI)/Computer Assisted Field Editing (CAFE)	<input checked="" type="checkbox"/> Organize and conduct fieldwork supervision <input checked="" type="checkbox"/> Co-facilitate report writing workshops <input checked="" type="checkbox"/> Co-facilitate survey dissemination and data use workshops <input checked="" type="checkbox"/> Co-facilitate data analysis training <input checked="" type="checkbox"/> Co-facilitate GIS workshops
Tools, Equipment and Resources	
<input checked="" type="checkbox"/> Standardized Training Curricula (TOT materials i.e., facilitator’s guide, participant manual & users training materials)	<input checked="" type="checkbox"/> Equipment <input checked="" type="checkbox"/> Standardized Training Impact Assessment Tools <input checked="" type="checkbox"/> Standard operating procedures (SOPs)

As part of the strategic survey training package, a strong emphasis will be placed on competency-based training to ensure counterparts are able to co-lead most survey-related training activities. DHS will design and implement a two-tiered questionnaire pretest training program using a cascade model in DHS focus countries (but will offer it to non-focus countries at their request) as a way to quickly but efficiently transfer to counterparts the knowledge, skills and abilities necessary to effectively carry out their roles and responsibilities. This will at the

same time help alleviate the challenges of managing a large number of trainees during the main training. For example, in the first tier we will conduct a two day-long training of trainers (TOT) based on adult learning principles where the emphasis will be on the mastery of training and facilitation skills. TOTs will mainly target key survey staff during the pretest that are expected to train others during the main training.

In the second tier, the emphasis will be on the mastery of the content as traditionally implemented. We will develop and implement assessment tools to monitor all trainees' performance with a specific emphasis on the performance of survey staff from the implementing organization. We envision using a variety of tools to assess performance prior to, during and post training. For example, a simple pre and post-test will be administered to gather information on the effectiveness of the training and the type of skills enhanced. DHS will seek to measure the impact of training programs up to at least level two of *Kirkpatrick's* four levels of evaluation. Final selection of trainers will be based on their performance during "teach back" and on other assessment scores. We will develop a Trainer's Guide and a Participant Manual by adapting preexisting materials or developing new ones, which implementing agencies can later use to conduct refresher trainings or conduct TOTs on their own for other surveys they are responsible for.

Stage III – an implementing agency is in Stage II if it receives a mean score between 90-100% in all twelve modules of the CAT during their assessment. Special emphasis will be placed in strengthening competencies listed in the institutional as well as the laboratory testing modules. This also indicates that the implementing agency is able to jointly lead in most survey activities. Counterparts are now fairly competent in conducting the majority of survey functions and can largely ensure quality assurance on the majority survey continuum. Once they have completed stage III, countries at this stage are likely to continue to receive capacity strengthening support through continuous mentoring and coaching from DHS experts in specialized technical areas or in new tasks. Capacity strengthening is a long process, and success will depend on organizational commitment to CS activities and on whether or not the implementing agency is experiencing high staff turnover - which would set back progress made in survey capacity. At the end of stage III, partners should demonstrate competencies in survey design and in survey planning, implementation and management as listed in Exhibit 8.

Exhibit 8: Stage III Competencies (in addition to Stages I and II)

Survey Design	
<input checked="" type="checkbox"/> Identify scope of work (key indicators at national, regional and district levels) <input checked="" type="checkbox"/> Set up an efficient financial management system to manage DHS survey funds <input checked="" type="checkbox"/> Plan and secure an adequate survey staff and infrastructure capacity <input checked="" type="checkbox"/> Adapt data processing programs with appropriate level of quality <input checked="" type="checkbox"/> Set up a survey committee to provide guidance throughout the process	
Survey Planning, Implementation and Management	
<input checked="" type="checkbox"/> Design and test questionnaire <input checked="" type="checkbox"/> Lead sampling trainings <input checked="" type="checkbox"/> Lead pretest trainings <input checked="" type="checkbox"/> Lead main trainings <input checked="" type="checkbox"/> Plan and lead fieldwork activities <input checked="" type="checkbox"/> Lead trainings on portable electronic devices for	<input checked="" type="checkbox"/> Plan and lead report writing workshops <input checked="" type="checkbox"/> Plan and lead survey dissemination and data use workshops <input checked="" type="checkbox"/> Co-facilitate data analysis training

data collection such as Computer Assisted Personal Interviewing (CAPI) and Computer Assisted Field Editing (CAFE).	
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4.3 OPTIONAL DHS PACKAGE

This package will offer a menu of activities for partners to choose from to strengthen specific technical competencies. This menu is suitable for any country that needs further capacity strengthening on particular technical areas. It is more appropriate for team trainings and will be conducted as stand-alone activities rather than standard survey activities. Implementing agencies may choose to receive this training repeatedly in the same content area as long as they are able to fund the activity. Some of DHS' training offerings require prior knowledge or other preparation. Depending on the complexity of the content, trainees may be required to pass a minimum requirements test. The DHS capacity strengthening team will work with subject matter experts to develop a list of such topics and the required assessment tools. We will also make relevant training materials and resources available to trainees. Implementing agencies can request team trainings in the following areas to accelerate their progress on a specific module of the capacity assessment tool:

- Sampling frame design and evaluation, including sample selection, calculation of weights, calculation of sampling errors, and cleaning and correction of sampling frame as necessary –Pre-requisites are a master of statistics or equivalent degree or documented sampling experience or advanced knowledge in statistics, and familiarity with Microsoft Office Excel. This will be a hands-on training.
- Data processing related training such as in CPro - Potential participants should have basic computer skills.
- Tabulation training using CPro, SPSS and Stata. Potential participants should have familiarity with the relevant software.
- Survey dissemination and data use workshops- Pre-requisites are interest and knowledge in a health-related topic area and college degree level writing skills.
- Advanced Data Analysis Training- Pre-requisites are experience with SPSS or Stata; interest and knowledge in a health-related topic area and college degree level writing skills.
- Open-Source Geographic Information Systems (GIS) Workshop- Pre-requisites are prior experience with Excel and interest and knowledge in a health-related topic area.

4.4 CONTINUOUS CAPACITY STRENGTHENING

In addition to the face-to-face training courses described above, one of the best ways of ensuring sustainable capacity strengthening is through continuous skills building, mentoring and coaching. Subject to availability of funding, DHS envisions developing a core online platform solution to house all of DHS's distance learning courses. We will also explore ways to integrate the DHS User Forum with the core online platform to leverage online collaboration and increase peer-to-peer exchange. Courses for the online platform will be designed to supplement on-site trainings while providing partners with the opportunity for continuous self-directed learning

content. They will also afford an opportunity to sustain competencies acquired during face-to-face trainings.

The capacity strengthening team will work with DHS subject matter experts to develop and implement harmonized distance learning courses for selected technical topics to reinforce in-country capacity strengthening activities. We will select a platform (e.g. WebEx, Adobe Connect, Moodle) with multiple capabilities such as (1) an online collaboration forum for participants to exchange experiences prior and post onsite trainings, (2) a full library to house all of the tools and training materials vetted by DHS subject matter experts, (3) webinar series carried out on a monthly or quarterly basis. This entails refining existing training materials and developing new ones. Sessions will be delivered either synchronously or asynchronously with regular quizzes to check the learners' understanding of the content and to provide an optimum learning experience. Potential sessions will include:

- Survey design, implementation and management training
- Biomarker training (i.e. blood collection, fieldwork supervision, lab testing)
- Sampling training (sample design, selection and weighing)
- Data processing and tabulation related training using CSPRO, SPSS, or Stata
- CAFE/CAPI training (how to use portable electronic devices for efficient data collection)

4.5 CORE INSTITUTIONAL CAPACITY STRENGTHENING ELEMENTS

After the survey is complete, additional capacity strengthening workshops are often requested for: sampling, data processing, analyzing DHS datasets, GIS, using DHS results in journalism, and using DHS results for decision making. DHS' institutional capacity strengthening strategies will seek to formalize these workshops to transfer competencies to counterparts through innovative training approaches as outlined below:

4.5.1 Increase South-to-South Capacity

In addition to DHS home office staff providing capacity building, DHS is working to expand the number of South-based consultants able to support DHS countries as another key element of capacity strengthening. Activities in this category will focus on increasing the capacity of South-to-South consultants for more intensive technical assistance. DHS currently works with more than 40 consultants who provide both short-term and long-term technical assistance. Strengthening their capacity to leverage DHS core efforts in providing high quality technical assistance in DHS survey design, implementation, management, monitoring and evaluation is crucial. We will implement two main initiatives:

4.5.2 DHS Consultant Database

We will expand our South-to-South consultant network as a way of institutionalizing survey processes and systems. This will require creating and maintaining a formal **consultant database** to store profiles of vetted consultants, document their performance and ensure standardized support to host countries in organizing and carrying out DHS surveys. Selected candidates will go through a test period where they will take on a secondary role until they have demonstrated a full mastery of the DHS approach.

4.5.3 Regional Consultants Technical Workshops

DHS staff will organize and conduct standardized regional technical workshops periodically, to upgrade consultants' skills to ensure quality data collection in all DHS countries. The primary goal is to capacitate consultants and enable them to organize and implement workshops to train others in DHS-supported countries. The workshops will have two components: The first component will focus on consultants' facilitation skills (e.g., efficient use of techniques and methods) whereas the second component will emphasize mastery of training materials and technical content. Potential topic areas will include:

- Biomarker training (e.g. blood collection, fieldwork supervision, lab testing)
- Sampling training (sample design, selection and weighing)
- Training on tabulation using CSPRO, SPSS and/or Stata
- Training in DHS data processing methodology (design of menu systems and adaption of standard programs to survey requirements)
- Trainings on portable electronic devices for data collection such as Computer Assisted Personal Interviewing (CAPI) and Computer-Assisted Field Editing (CAFE).
- Training of Trainers skills

4.6 ADDITIONAL CAPACITY STRENGTHENING OPTIONS FOR LOCAL INSTITUTIONS

4.6.1 DHS Survey Boot Camps

Boot camps offer another approach to capacity strengthening, in addition to regional workshops and are important because they offer the opportunity to train a broader audience. Boot camps will be offered periodically and based on requests from host countries. The main goal will be to increase mastery of the technical content and enable counterparts to use the knowledge, skills and abilities acquired at their home institutions. Boot camps will be organized and implemented in the form of blended courses led by DHS' technical experts and will target counterparts from implementing organizations (such as NSO, MOH and other local organizations). Trainees will participate in face-to-face sessions as well as distance learning such as webinars. DHS headquarters staff will use support from USAID Missions and other partners to advertise the offerings. Participants will take pre-requisite webinar courses on specific technical topics prior to attending the boot camps. We will develop and/or adapt existing materials to meet trainees' needs. Participants will be required to develop individual post training action plans, which they'll implement upon return to their respective countries. Boot camp facilitators will conduct follow up via online collaboration platforms for additional mentoring and coaching. Boot camps will also serve as platforms to promote peer learning and country-to-country exchanges. Potential technical boot camp topics may include:

- Biomarker training (e.g. blood collection, fieldwork supervision, lab testing)
- Sampling training (sample design, selection and weighing)
- Training on tabulation using CSPRO, SPSS, and/or Stata

4.6.2 Further Analysis Training

Based on requests from host countries, DHS will organize and conduct country-specific trainings in further analysis for health and demographic researchers and practitioners. The primary goal is to strengthen the capacity of counterparts by equipping them with the knowledge and skills needed to analyze DHS survey data in Stata or SPSS and prepare publishable quality reports and papers. Participants come from a variety of institutions including the Ministries of Health (MOH), National Statistical Offices, USAID missions, other donors, NGOs and other institutions. Topics are usually selected by countries and participants are expected to produce a paper or PowerPoint presentation at the conclusion of the training.

4.6.3 DHS Fellows Training Program

The annual Fellows Program brings teams of university faculty from DHS countries together to develop analytical skills, conduct analysis of DHS data, write research papers and develop a plan to strengthen capacity at their home institutions. This program is a three part program aimed at improving participants' ability to conduct further analysis of recent surveys. It is a combination of face-to-face and distance learning and will occur yearly.

4.6.4 Data Mapping for Decision Making

Based on request from host countries, DHS will design and implement regional workshops to capacitate local counterparts on the application of GIS in public health. This is a 5-day workshop and will teach participants how to link DHS health data to other spatial data and to create meaningful maps using GIS software. The target audience of the training is health-related professionals committed to developing the knowledge and skills necessary to create and interpret health information maps. Potential topics will include an introduction to GIS concepts (including GPS data collection and datums/projections), management and cleaning of data in Excel, use of maps for decision making, and a hands-on introduction to QGIS software. This offering will be partially implemented via the core online collaboration platform.

4.6.5 Survey Dissemination and Data Use Workshops

Based on request from host countries, DHS will organize and conduct country-specific trainings to increase counterpart capacity in data use for decision making. To achieve this, we will organize and implement the following training:

- Training of Trainers (TOT) for junior faculty and graduate students using the DHS Curriculum
- Thematic workshops
- Regional/provincial workshops
- Journalist workshops
- Data visualization
- Data for decision making
- Social media

5 CSS IMPLEMENTATION

5.1 POTENTIAL CHALLENGES FOR IMPLEMENTING THE CSS

There are several challenges that The DHS Program faces in implementing the CSS and achieving its goals:

- The tension between rapid, quality survey implementation and the time needed for capacity strengthening of local organizations.
- Funding availability for capacity strengthening in addition to survey implementation funds.
- The variety of skill levels of DHS counterparts at country level.
- Country commitment and willingness to make DHS counterparts available for survey tasks and capacity building.

One of the potential challenges in implementing the CSS is the tension between capacity strengthening and the implementation of a DHS/SPA survey. Whereas DHS/SPA is deadline driven, sustainable capacity strengthening is a long term process and by nature will require significant investment in time and resources. To mitigate the tension between rapid, quality survey implementation and the time needed for capacity strengthening of local organizations, we will revise our technical assistance process to include a capacity strengthening component as part of the DHS survey package. This will provide not only higher visibility for capacity strengthening activities but will ensure that they are implemented in a seamless manner. It will thus require adding a capacity strengthening budget line item for every survey designed. To leverage this, we will train our regional coordinators in how to implement the CAT, which will enable them to do rapid capacity assessments and to factor results into discussions with partners and donors. Lastly, we will make DHS's performance solutions menu available to implementing agencies and will assist them in determining those intense capacity strengthening activities that could be provided as stand-alone activities.

Another aspect is the frequency of the DHS survey at the country level. In most countries standard surveys are carried out every five years. This poses a challenge in terms of transferring and sustaining capacity locally, since sustainability will depend on the availability of opportunities for counterparts to practice and apply DHS skills once developed.

A huge potential stumbling block for sustainable transfer of survey capacity is funding. Successful implementation of the CSS will require a strong commitment from partners and financial investment. Traditionally, DHS/SPA surveys were funded mostly by USAID with host country contributions; over the past several years, however, other donor organizations have begun to contribute greatly to the implementation costs of the DHS surveys. In many cases, other-donor funds typically go towards paying only for local costs or supplies which can make up the lion share of survey funds. Rarely does any funding from other donors go toward paying for technical assistance by DHS staff, which is an important element in transferring capacities to local partners. Other donor organizations sometimes have competing priorities and interests in the survey and may not be inclined to invest in local capacity strengthening. To mitigate this, we will organize and conduct a stakeholders meeting with international donor organizations to gain

their buy-in and advocate with their field offices to fund aspects of the CSS. In addition, we will seek support from USAID missions in engaging donor organizations at country level and obtain their commitment to invest in capacity strengthening of implementing agencies. Additionally, we will include an outreach educational component as part of survey design.

DHS/SPA capacity requires many different types of skills and expertise along the continuum of the survey process. Capacity strengthening in components of that continuum requires that counterparts have some minimum credentials which is not always the case. In other words, implementing organization staff whose capacity needs to be built must have basic foundational knowledge, skills and abilities which they may not have due to their academic or professional background. Not being able to secure counterparts with the appropriate background to capacitate, since the implementing agency has control over the staff selection process, may undermine capacity strengthening efforts. For example, the prerequisites for capacity strengthening in sampling are a master's degree in statistics; or at the very least a practicing sampling statistician with some experience.

Finally, it depends on the implementing agency's ability, willingness, commitment, and dedication to invest in securing, retaining and capacitating its survey workforce. Implementing Agencies are often understaffed or function with very limited or no autonomy. For example, their administrative and financial processes as well as working conditions are still governed by the national government. This dependence, in most cases, creates bottlenecks for programmatic improvements and consequently will impede sustainable capacity strengthening activities. Further, local DHS survey staff are often hired on a project by project basis, making implementing agencies vulnerable and subject to high turnover. Organizational autonomy, whether financial or administrative, is paramount in enabling implementing agencies to advocate for themselves in order to secure necessary DHS capacity assets to ensure their readiness.