

Transition and Sustainment Plan

ELECTRONIC INTEGRATED DISEASE SURVEILLANCE SYSTEM (EIDSS)

**Between Cooperative Biological Engagement Program
(CBEP), Defense Threat Reduction Agency (DTRA)
and**

REPUBLIC OF GEORGIA

Versions

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List of acronyms and abbreviations

Acronym	Definition
API	Application Programming Interface
AVR	Analysis, Visualization, Reporting
B&V	Black & Veatch Special Projects Corp.
CBEP	Cooperative Biological Engagement Program (also known as BTRP)
CDC	Centers for Disease Control and Prevention
C&IT	Communication and Information Technology
COTS	Commercial Off the Shelf
DTRA	Defense Threat Reduction Agency
DTRO	Defense Threat Reduction Office
EIDSS	Electronic Integrated Disease Surveillance System
HMIS	Health Management Information System
IT	Information Technology
LMA	Laboratory of the Ministry of Agriculture
MoA	Ministry of Agriculture
MoLHSA	Ministry of Labor, Health and Social Affairs
NCDC&PH	National Center for Disease Control and Public Health
NFA	National Food Agency under the MoA
OIE	World Organization for Animal Health
PACS	Pathogen Asset Control System
PHC	Public Health Center
POC	Point of Contact
SOP	Standard Operating Practice or Procedure
TADR	Threat Agent Detection and Response System
TBD	To Be Determined
TOC	Transfer of Custody or Table of Contents
TOO	Transfer of Ownership
TRV	TADR Response Vehicle
WHO	World Health Organization

1. Scope

1.1 Identification

This plan describes sustainment and transition for Electronic Integrated Disease Surveillance System (EIDSS) in Georgia.

This document provides general information as it applies to EIDSS transition and sustainment plus items specific to the implementation and transition of EIDSS in Georgia.

1.2 System overview

EIDSS is an electronic system developed to improve national disease surveillance providing a secure way to collect, share and analyze human, veterinary, vector and laboratory data in one integrated database using mobile phones, web access and desktop solutions. Through customization the system is tailored to the specific host country needs matching its surveillance priorities. The development started in 2005 and is based on more than 100,000 man-hours of cutting-edge expertise from the Centers for Disease Control and Prevention (CDC) and other institutions. Black & Veatch Company sponsored by the Defense Threat Reduction Agency (DTRA) developed versions 1-6.

1.3 Document overview

This document provides a plan for transition and sustainment of EIDSS system to Georgia. The content of the document includes a description of the required software support resources, recommended procedures, training, and transition planning. It also covers individual turnover approach, EIDSS sustainment recommendations and timeline and transition plan for Georgia. This document does not include operation information which is addressed in user and administrator manuals.

The document does not address EIDSS Open Source framework. This includes administration of the EIDSS network and domains and EIDSS software administration.

1.4 Relationship to other plans

This document provides specific details to the transition of EIDSS. Overarching information of transition and sustainment plan of CBEP is controlled by the DTRA country manager and is written out in the Joint Transition Plan for CBEP in Georgia, where this document is referenced as a separate document.

2. Referenced documents

The table below provides a list of documents referenced in this document. The documents are available (or will be made available) in Georgian, as required, upon request.

Table 1. Referenced documents

No	Title	ID No.	Version/Release No.	Description	Available in local language
1	EIDSS country customization package				Yes
2	EIDSS Translation SOP				Upon request

No	Title	ID No.	Version/Release No.	Description	Available in local language
3	EIDSS sites management SOP				Upon request
4	EIDSS maintenance and support SOP	026-TADR-EN-0010	1.6	EIDSS C&IT Operations and support plan	Upon request
5	EIDSS Country Customization: Standard operating procedures				Upon request
6	Current customization requirements update process				Upon request
7	EIDSS Customization Process - business process module				Upon request
8	EIDSS Administration Manual	Admin_Manual		Manual	Yes
9	EIDSS Analysis, Visualization and Reporting Module Manual	AVR_Manual		Manual	Yes
10	EIDSS Hand-Held Manual	HH_Manual		Manual	Yes
11	EIDSS User Manual	User Manual		Manual	Yes
12	EIDSS WEB User Manual	WEB_Manual		Manual	Yes
13	EIDSS CONOPS (Concept of Operations)	CO-040-TADR-EN-0100	1	Electronic Integrated Disease Surveillance System (EIDSS) System Definition – Concept of Operations (CONOPS)	Upon request
14	Veterinary Module Guidance	083-EIDSS-EN-0406		Training Guidance	Yes
15	Human Module Guidance	083-EIDSS-EN-0407		Training Guidance	Yes
16	Laboratory Module Guidance	083-EIDSS-EN-0408		Training Guidance	Yes
17	Vector Surveillance Module Guidance	083-EIDSS-EN-0409		Training Guidance	Yes
18	EIDSS Desktop Intro	083-EIDSS-EN-0410		Training Guidance	Yes
19	Administrative Module Guidance	083-EIDSS-EN-0411		Training Guidance	Yes
20	AVR Module Guidance	083-EIDSS-EN-0412		Training Guidance	Yes
21	Web Human Module Guidance	083-EIDSS-EN-0413		Training Guidance	Yes
22	Web Veterinary Module Guidance	083-EIDSS-EN-0414		Training Guidance	Yes
23	Web Laboratory Module Guidance	083-EIDSS-EN-0415		Training Guidance	Yes
24	Web Vector Module Guidance	083-EIDSS-EN-0416		Training Guidance	Yes
25	Web Mobile Human	083-EIDSS-		Training Guidance	Yes

No	Title	ID No.	Version/Release No.	Description	Available in local language
	Module Guidance	EN-0417			
26	Web Mobile Vet Module Guidance	083-EIDSS-EN-0418		Training Guidance	Yes
27	Web Outbreak Module Guidance	083-EIDSS-EN-0419		Training Guidance	Yes
28	Introduction to EIDSS - Presentation	081-EIDSS-EN-0420		Presentation	Yes
29	Post Training Test for the Human Module	084-EIDSS-EN-0421		Test human module	Yes
30	Post Training Test for the Laboratory module	084-EIDSS-EN-0422		Test laboratory module	Yes
31	Post Training Test for the Veterinary Module	084-EIDSS-EN-0423		Test Veterinary Module	Yes
32	Post Training Test for the Vector Module	084-EIDSS-EN-0424		Test Vector Module	Yes
33	C&IT Training Plan	025-TADR-EN-0001	7.0	Training plan	Yes
34	EIDSS training materials for Human Module	Exam EIDSS_Epi-Human		Exercises and Tests	Yes
35	EIDSS training materials for Vet Module	Exam EIDSS_Epi-Vet		Exercises and Tests	Yes
36	EIDSS training materials for Laboratory Module	Exam EIDSS_Lab		Exercises and Tests	Yes
37	EIDSS training materials for Vector Module	Exam EIDSS_Vector		Exercises and Tests	Yes
38	EIDSS presentation	Principles of EIDSS		Presentation for Users	Yes
39	EIDSS System Architecture design Description (SADD)	SA-050-TADR-EN-0004			Upon request
40	EIDSS Routers Networking Design Description	SA-050-TADR-EN-0018			Upon request
41	EIDSS System and Network IP Addressing Schema & Naming Convention	SA-050-TADR-EN-0015			Upon request
42	EIDSS Backup and Recovery	050-EIDSS-EN-0015			Upon request
43	EIDSS Deployment Guide for a Typical Installation	SA-050-EIDSS-EN-0019			Upon request
44	EIDSS HW/COTS SW Specification	SA-050-TADR-EN-0005			Upon request
45	EIDSS Site Specific Design				Upon request

3. Software support resources

This section describes software support resources required to support EIDSS. Included in the section are resources on customization, expansion, monitoring, control and support of the system broken down into the following areas:

- EIDSS Customization – a process of the system’s configuration to local needs including reference values, case definitions, user access rights, data flow filtration settings, data archiving settings, personal data accessibility settings, mandatory fields settings, statistical data, specific reports and GIS. Some customization processes (preparation of specific reports, data flow filtration settings, data archiving settings, personal data visibility settings, mandatory fields settings) require development effort and are out of scope of this document. Operating GIS-specific data requires special GIS skills and can be outsourced to local GIS providers or completed through the Open Source Community.
- EIDSS Translation – a process of the modification of the system’s user interface language including database references, case definitions terms and GIS labels. Translation of terms used in data entry forms, reports and help, which require a code recompilation, is out of scope of this document.
- EIDSS Site management – adding/removing/modifying EIDSS sites
- EIDSS Hardware, software and network monitoring system – monitoring of health status of EIDSS hardware, software and network infrastructure
- EIDSS Remote access – tool for remote access to EIDSS sites for system administration purposes
- EIDSS Helpdesk system – Helpdesk system is used for logging EIDSS incidents, problems and manage helpdesk requests

The detailed description of the software support areas is provided below:

1) **EIDSS Customization:**

EIDSS customization is a way of configuring the system to local needs including support of the current surveillance priorities, most recent case definitions and GIS data. The Customization covers the following areas: (1) Configuring *Reference table values and their interconnectivity with each other through various matrices*, (2) Configuring desktop and web *Flexible Data Entry Forms* (a customizable part of EIDSS screen forms), (3) Configuring *User access rights for various groups of users*, (4) Configuring *Settings for data filtration between different sites*, (5) Configuring *Settings for data archiving*, (6) Configuring *Settings for accessibility of personal data* of patients/farmers to various groups of users, (7) Configuring the *Set of mandatory fields* in EIDSS data entry forms, (8) Configuring *Statistical data and its types*, (9) Configuring *Specific reports*, and (10) Configuring *GIS data*.

EIDSS Customization can be performed in two ways: single changes can be made through the EIDSS administrative interface, multiple changes (including changes to GIS data) can be made through the provided SQL scripts and configuration templates describing the current and desired configuration state.

The process of making changes through the EIDSS administrative module is described in the Administrative manual. The processes of implementing multiple changes through SQL scripts as well as recommendations are described in [EIDSS country customization SOP].

2) EIDSS Translation:

The following EIDSS components can be localized: (1) System interface, (2) Reference Values, (3) GIS data, (4) Desktop and web *Flexible Data Entry Forms* (a customizable part of EIDSS screen forms), (5) Specific reports.

EIDSS translation for Reference Values, GIS data and Flexible Data Entry Forms can be performed in two ways: single changes can be made through the EIDSS administrative module, multiple changes (including changes to GIS data) can be made through the provided SQL scripts. EIDSS translation for system interface and specific reports can be performed through the Software Localization Tool (SLT).

The process of making translation changes through the EIDSS administrative module is described in the Administrative manual. The processes of implementing multiple translation changes through SQL scripts and SLT as well as recommendations are described in [EIDSS Translation SOP].

3) EIDSS Site Management:

Adding a new site to the EIDSS system shall be performed according to [EIDSS Sites Management SOP].

4) EIDSS Monitoring:

EIDSS Monitoring System consists of two parts - Hardware & software monitoring system and the EIDSS networking monitoring tool.

EIDSS Monitoring System covers the following EIDSS system health status control tasks: (1) Server and desktop hardware health status – CPU load, RAM load, HDD available space and health, hardware temperature and power, (2) Server and desktop software status – Microsoft Windows Server errors, Microsoft SQL server jobs status, SQL replications status, (3) Networking equipment status – Routers CPU and RAM load, Interfaces' bandwidth load and (4) Customizable EIDSS health status reports.

Monitoring configurations and generating system health status reports are described in [EIDSS maintenance and support SOP].

5) EIDSS Remote Access:

EIDSS Remote Access is required for remote support and troubleshooting of EIDSS sites. Usage of the remote access tool should comply with all local laws and regulations. Usage of the Remote Access Tool is described in [EIDSS maintenance and support SOP].

6) EIDSS Helpdesk System:

The EIDSS Helpdesk System is used for logging incidents, problems and change requests. It is meant to act as standard helpdesk application software, whose goal is to provide IT support with up-to-date information concerning IT-related user issues, minimize response time, support clear

escalation procedures, ensure monitoring of incidents, provide statistics, and assist in preventing and identifying potential IT problems.

These resources will give the host-country the required tools to sustain and adapt the system independently of DTRA and B&V.

Certain advanced customization needs associated with the adoption of new versions (see above for the detailed list of examples) or bug-fixing of certain critical problems in the core of the system would require help of the software developers with in-depth knowledge of the system and a thorough understanding of the EIDSS project. Access to these skills and continuous engagement will be fulfilled through the participation in the Open Source community. The community can provide additional support and also benefit from the users input through new requirements and testing. A detailed description of the Open Source community resources and its operations is outside of the scope of this document and will be addressed by DTRA, for information visit <http://eidss.codeplex.com>.

The hardware and software resources provided below are recommended by the developers of EIDSS but can be substituted with other similar instruments potentially already available in the host-country.

3.1 Facilities

EIDSS support server hardware should be located in a dedicated server room with a physical access control system and an air conditioning system. The server room should conform to all local standards and regulations for data storage facilities.

Facilities for EIDSS support desktop equipment should fulfill all local standards and regulations for computer equipped workplaces. General, local and site-specific requirements are addressed in the Site Survey and Site-Specific Design documentation.

3.2 Hardware

The table below provides the list of hardware along with its identification, description and associated documentation needed to support the deliverable software. Most support tasks can be accomplished using existing desktop equipment taking into account local information security legislation and regulations. Exceptions will be noted in this document as well as information security documents developed.

Table 2. List and description of the required hardware

Hardware	Description
EIDSS Customization / Translation / Management Workstation	a. Specific model, versions, configurations: EIDSS Customization / Translation / Management Workstation • CPU: 4 cores • RAM: 4 GB • Available Free Storage: 60 GB • OS: Windows 7; Windows 8.1. b. Rationale: Minimum software tool requirements for Microsoft SQL Server2008 R2 Express with Advanced Services c. User/operator manual: Provided by corresponding manufacturer d. Acquiring status: A standard EIDSS workstation supplied to the host country can be used to perform the required functions e. Acquiring availability: N/A

Hardware	Description
	f. Manufacturer support, licensing, data rights, etc.: See manufacturer's documentation. g. Security/privacy: None
EIDSS Hardware & software monitoring system Server	a. Specific model, versions, configurations: Virtual Machine on Monitoring Server • CPU: 4 cores • RAM: 6 GB • Available Free Storage: 100 GB • OS: RHEL 6.2, CentOS 6.2 b. Rationale: Minimum software tool requirements for Nagios XI. c. User/operator manual: Provided by corresponding manufacturer. d. Acquiring status: A standard EIDSS component supplied to the host country. e. Acquiring availability: N/A f. Manufacturer support, licensing, data rights, etc.: See manufacturer's documentation. g. Security/privacy: None
EIDSS Network monitoring Server	a. Specific model, versions, configurations: Virtual Machine on Monitoring server • CPU: 4 cores • RAM: 6 GB • Available Free Storage: 100 GB • OS: Windows 7; Windows Server 2008 R2, Windows Server 2012, RHEL 6.2, CentOS 6.2 b. Rationale: Minimum software tool requirements for ManageEngine NetFlow Analyzer 9 c. User/operator manual: Provided by corresponding manufacturer. d. Acquiring status: A standard EIDSS component supplied to the host country. e. Acquiring availability: N/A f. Manufacturer support, licensing, data rights, etc.: See manufacturer's documentation. g. Security/privacy: None
EIDSS Remote Access Servers / Workstations	a. Specific model, versions, configurations: EIDSS Server / Workstation • CPU: 4 cores • RAM: 4 GB • Available Free Storage: 20 GB • OS: Windows 7; Windows 8.1; Windows Server 2008 R2; Windows Server 2012R2. b. Rationale: Minimum software tool requirements for TeamViewer 8 c. User/operator manual: Provided by corresponding manufacturer. d. Acquiring status: Tool is deployed on EIDSS servers / workstations hardware supplied to the host country. e. Acquiring availability: N/A f. Manufacturer support, licensing, data rights, etc.: See manufacturer's documentation. g. Security/privacy: None
EIDSS Helpdesk system Server	a. Specific model, versions, configurations: Virtual Machine on Monitoring or EIDSS server • CPU: 4 cores • RAM: 6 GB • Available Free Storage: 60 GB • OS: Windows Server 2008R2, 2012R2; b. Rationale: Minimum software tool requirements for SpiceWorks c. User/operator manual: Provided by corresponding manufacturer. d. Acquiring status: System to be supplied to the host country in terms of EIDSS transition plan. e. Acquiring availability: N/A f. Manufacturer support, licensing, data rights, etc.: See manufacturer's documentation. g. Security/privacy: None

Hardware refresh

Hardware refresh is vital to sustainment of the system. Timely refresh reduces risk of incidents and outages, reduces duration of outside incidents, eliminates electronic obsolescence, and increases the system usage life. The equipment refresh provides an opportunity for performance improvement through technology enhancements.

The maintenance plan includes the specific manufacturer's parts, including acceptable replacement parts, the duration required to acquire and replace the part and any pertinent information required for procurement and installation of the faulty part.

Appendix B lists equipment that is critical for EIDSS operation in its current configuration in a specific country. It is important for the host nation to be prepared for the future changes in the hardware as manufacturers replace current equipment models with new models and cease support or spare parts issue for older models. It should also be taken into consideration that equipment change may also be driven by EIDSS modifications implemented in future versions that will dictate the update in requirements towards EIDSS-specific equipment. It should also be mentioned that as host nation progresses with utilization of EIDSS Web, some server equipment may be taken out of utilization. Transition to EIDSS Web also minimizes importance of specific workstation hardware model/specification, provided the workstation hardware is compatible with requirements of software needed for browser types/versions that support EIDSS operation.

It is recommended to regularly (at least annually) check on the support plans updates for the critical hardware spare parts and reflect changes (if any) in the sustainment plans and budget forecasts accordingly.

Documentation

The hardware-associated documentation required for support of the system is provided in Table 1 (items 39-45).

3.3 Software

A set of software to support the EIDSS installation is listed in the table below. This set is recommended by B&V and is being used by the B&V support team on a regular basis in all EIDSS participant countries. This list can be tailored for the country to address local needs and regulations. The recommended software can be replaced by other compatible packages supporting the required functionality, interfaces and formats. Decisions on software substitutions needs to be made by the experts in the field and may be supported in the future by the Open Source community. A description of the Open Source community's capacity is out of the scope of this document; for information visit <http://eidss.codeplex.com>.

Table 3. List and description of the required software

Software	Description
Microsoft SQL Server2008 R2 Express with Advanced Services	a. Specific model, versions, configurations: Microsoft SQL Server2008 R2 Express with Advanced Services b. Rationale: DBMS-compatible instrument recommended for the following tasks: - Customization - Translation - Sites Management c. User/operator manual: Provided by corresponding manufacturer (Microsoft) d. Acquiring status: Exists as a part of EIDSS environment software

Software	Description
	e. Acquiring availability: N/A f. Manufacturer support, licensing, data rights, etc.: See manufacturer's documentation. Free. g. Security/privacy: None
OpenOffice Calc	a. Specific model, versions, configurations: OpenOffice Calc b. Rationale: Spreadsheets management software recommended for the following tasks: - Customization - Translation c. User/operator manual: Provided by corresponding manufacturer d. Acquiring status: Exists as a part of EIDSS environment software e. Acquiring availability: N/A f. Manufacturer support, licensing, data rights, etc.: See manufacturer's documentation. Open Source Software. Free. g. Security/privacy: None
Software Localization Tool	a. Specific model, versions, configurations: Software Localization Tool b. Rationale: SLT is recommended for keeping track of EIDSS database, flexible forms and GIS translations. c. User/operator manual: Provided as a part of the transition plan d. Acquiring status: Provided as a part of the transition plan e. Acquiring availability: N/A f. Manufacturer support, licensing, data rights, etc.: Free g. Security/privacy: None
Nagios XI	a. Specific model, versions, configurations: Nagios XI b. Rationale: Recommended for monitoring of replication, server, services and equipment status. Highly customizable and extendable system. The most powerful IT infrastructure monitoring system on the market. c. User/operator manual: Provided as a part of the transition plan d. Acquiring status: Standard EIDSS support component supplied to the host country. e. Acquiring availability: N/A f. Manufacturer support, licensing, data rights, etc.: Perpetual License. Annual renewal for product support and updates is \$4995. g. Security/privacy: Host-country requirements
ManageEngine Netflow Analyzer	a. Specific model, versions, configurations: ManageEngine Netflow Analyzer 6 b. Rationale: Recommended for monitoring of Internet traffic and Internet channels load. NetFlow Analyzer, a complete traffic analytics tool, leverages flow technologies to provide real time visibility into the network bandwidth performance. c. User/operator manual: Provided as a part of the transition plan d. Acquiring status: Standard EIDSS support component supplied to the host country. e. Acquiring availability: N/A f. Manufacturer support, licensing, data rights, etc.: Perpetual License. Annual renewal for product support and updates is \$582. g. Security/privacy: Host-country requirements
TeamViewer	a. Specific model, versions, configurations: TeamViewer 8 b. Rationale: Recommended for remote support of EIDSS sites. Multiplatform, powerful, lightweight, works properly behind firewalls. c. User/operator manual: Provided as a part of the transition plan d. Acquiring status: EIDSS support component supplied to the host country if agreed. e. Acquiring availability: N/A f. Manufacturer support, licensing, data rights, etc.: Perpetual License. g. Security/privacy: Host-country requirements
SpiceWorks	a. Specific model, versions, configurations: SpiceWorks b. Rationale: Recommended as helpdesk system for tracking various issues at EIDSS sites. Easy

Software	Description
	to work, Email notification, User portal, Automated user notification, Reports and analysis of data, No cost, Regular free updates/Ongoing improvements, Free support. c. User/operator manual: Provided as a part of the transition plan d. Acquiring status: Provided as a part of the transition plan e. Acquiring availability: N/A f. Manufacturer support, licensing, data rights, etc.: Free of charge g. Security/privacy: Host-country requirements

Software Refresh

Critical software associated with EIDSS implementation/utilization and its lifecycle is listed in Table 4. While all the licenses for the below mentioned software have been procured and shall be transferred into host nation ownership, it is important for the host nation to accordingly plan for the end of the software lifecycle and its future update with newer versions. Software version update may be associated with increased license cost, improved personnel skills and update efforts at sites.

Table 4. List of critical software and its lifecycle

Products Released	Lifecycle Start Date	Mainstream Support End Date	Extended Support End Date	Service Pack Support End Date	Notes
Windows Server 2008 R2 Enterprise	10/22/2009	1/13/2015	1/14/2020	4/9/2013	
Windows Server 2008 R2 Service Pack 1	2/22/2011	1/13/2015	1/14/2020	n/a	Support ends 24 months after the next service pack releases or at the end of the product's support lifecycle, whichever comes first.
Windows Server 2012 R2 Standard	11/25/2013	1/9/2018	1/10/2023	n/a	
Microsoft SQL Server 2008 R2 Standard	7/20/2010	7/8/2014	7/9/2019	7/10/2012	
Microsoft Windows XP Service Pack 3	4/21/2008	4/14/2009	4/8/2014	n/a	Support ends 24 months after the next service pack releases or at the end of the product's support lifecycle, whichever comes first.
Windows 7 Service Pack 1	2/22/2011	1/13/2015	1/14/2020	n/a	Support ends 24 months after the next service pack releases or at the

Products Released	Lifecycle Start Date	Mainstream Support End Date	Extended Support End Date	Service Pack Support End Date	Notes
					end of the product's support lifecycle, whichever comes first.

It is recommended to regularly (at least annually) check on the support plans updates for the critical software and reflect changes (if any) in the sustainment plans and budget forecasts accordingly.

Documentation

The software-associated documentation required for support of the system is provided in Table 1.

3.4 Other documentation

The list of other documentation needed to support the deliverable software including plans, reports, studies, specification, etc. is provided in Table 1.

3.5 Personnel

EIDSS support requires a certain set of personnel trained according to the professional categories outlined in the table below. These categories can be fulfilled either by individual professionals for each of these categories or can be shared depending on the country-specific professionals availability and staffing plans. The exact number of professionals to support the systems varies based on the host country approach to sustainment. The required security clearances (if any) are defined by the local legislation and decisions of the authorities and/or operating agencies.

Table 5. Support personnel requirements

Personnel category	Description	Executed tasks
System Administrator	Performs customization and translation of EIDSS software, performs general support for site management; provides remote help to the end-users	EIDSS Customization EIDSS Translation EIDSS Sites Management: General Support EIDSS Remote Access
IT Support Specialist	Performs monitoring, deployment and maintenance of existing and new sites; executes requests from the Helpdesk	EIDSS Sites Management: Deployment EIDSS Monitoring EIDSS Helpdesk EIDSS Remote Access
Helpdesk Support Specialist	Performs basic user support, software and EIDSS hardware support, registers and tracks requests from the end users	EIDSS Helpdesk EIDSS Remote Access

The trained personnel have to obtain a set of skills to perform support tasks according to the table below. The C&IT Training Plan provides recommended and required set of courses to bridge the gap of the existing personnel skills and required skills to effectively perform support functions.

Table 6. Required skills, expertise and clearance by tasks

Task	Subtask	Required skills and expertise
EIDSS Customization	Reference Tables Values	SQL and database administrator skills for multiple changes. [Not required for changes

Task	Subtask	Required skills and expertise
		through EIDSS interface]
	Configuring <i>Geo Data</i>	SQL and database administrator skills for multiple changes. [Not required for changes through EIDSS interface]
	Configuring <i>Flexible Data Entry Forms</i>	SQL and database administrator skills for multiple changes. [Not required for changes through EIDSS interface]
EIDSS Translation	Reference Values	SQL and database administrator skills for multiple changes.[Not required for changes through EIDSS interface]
	Desktop, Web and Android data entry forms	SQL and database administrator skills for multiple changes. [Not required for changes through EIDSS interface]
	GIS data	SQL and database administrator skills for multiple changes. [Not required for changes through EIDSS interface]
EIDSS Sites Management: General Support	Add new Web/ Desktop site	SQL and database administrator skills.
	Add New CDR/ SLVL site	SQL and database administrator skills.
EIDSS Sites Management: Deployment	Redeploy or Deploy new Web/ Desktop site	Basic SQL and database administrator skills; Basic Windows XP/7 operating skills; Basic Microsoft Active Directory skill; Basic networking skills (internet connection); Basic knowledge of antivirus protection; Basic EIDSS application installation skills.
	Redeploy Deploy New CDR/ SLVL site	Basic SQL and database administrator skills; Basic Windows XP/7 operating skills; Basic knowledge of Operating System Virtualization; Advanced Microsoft Active Directory skill; Advanced networking skills (internet connection, Cisco equipment, VPN); Basic knowledge of backup/restore technologies; Basic knowledge of MS ISS server; Basic knowledge of antivirus protection (corporate level); Basic EIDSS application installation skills.
EIDSS Helpdesk	EIDSS Application Support	Knowledge about what EIDSS is designed for, how to work with it, its basic and specific functionalities.
	Hardware Support	Basic knowledge about computer hardware and its peripherals (UPS, Scanner, Printer, Backup), its cabling.
	Telecom Support	Basic knowledge about networking, telecommunication equipment (internet connection USB/cable modems), and cabling.
	Software Support	Basic Windows-based Operating Systems (XP, Win 7), Open Office/MS Office, Internet-browsing skills, backup/restore technologies.
EIDSS Monitoring	EIDSS Hardware & software	Basic SQL and database administrator skills;

Task	Subtask	Required skills and expertise
	infrastructure monitoring	Basic RedHat based linux skill; Advanced Windows XP/7/2008/2012 operating skills; Basic Microsoft Active Directory skill; Basic networking skills; Basic knowledge of monitoring systems; Advanced IT hardware service skill.
	EIDSS Networking Infrastructure monitoring	Basic Windows XP/7/2008/2012 operating skills; Advanced networking skills (internet connection, Cisco ASA, Cisco routers, VPN, routing, NetFlow).
EIDSS Remote Access	TeamViewer 8	Basic Windows XP/7 operating skills; Basic networking skills.

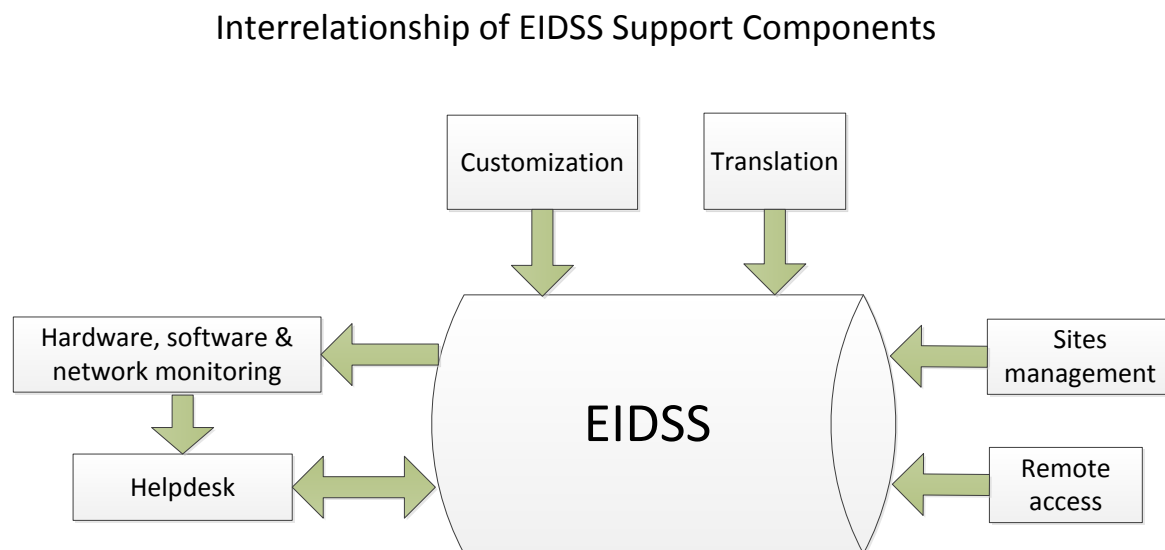
3.6 Other resources

It is recommended to have a computer equipment spare pool to support uninterruptable EIDSS system support processes. It should include spare hard drives, workstations, extended warranty support for server equipment. Also such consumables as A4 paper and cartridges for printers are required at each site. The exact specification of the required consumables and required levels of stock are recommended later in this document.

3.7 Interrelationship of components

Interrelationship of EIDSS support components is shown on Figure below.

Fig. 1. Interrelationship of EIDSS support components.



4. Recommended procedures

Common recommended procedures and lessons learned for different tasks are provided in the referenced documents.

5. Training

The successful sustainment of a long term training program includes: the selection of experienced personnel within a host country as trainers, the transfer of easy-to-administer training courses, upgradeable training materials, and computer-based training and appropriate training facilities.

The current B&V training program is designed to transfer a sustainable training program to the host country. As EIDSS is implemented the system is supported by comprehensive user training including a review and revision process based on feedback and evaluation. The B&V training program is designed to reach self-sustainability at an early stage even as hardware and software implementation is still occurring. This allows for easy replication by the host country.

The sustained training program is designed to properly train on long term basis EIDSS end users, IT specialists, and system administrators.

Trainers

As end users are being trained, the host country leadership shall identify end user candidates to become trainers in each specialty, e.g.; Human, Veterinary, IT, System Administration. The trainer candidates shall be selected from professionals who successfully passed end user training and have a degree of hands on experience. The country shall decide when and how many candidates to select as trainers. Selection criteria will include aptitude, geography, and specialty. Those selected as trainers will undergo the train-the-trainer process as soon as possible in order to gain experience training new professionals within the country. The country will decide when the host country trainer selection and training will take place, but the process shall occur before EIDSS is fully implemented. The country will also decide when to allocate new host country trainers as attrition and/or rotation demands. The train-the-trainer approach is explained in detail within the EIDSS & PACS C&IT Training Plan.

Training Courses

Details of training courses that will be transitioned to host countries are defined later in this document. Training courses are listed in detail within the EIDSS & PACS C&IT Training Plan and include as a minimum:

- Basic Computer training, EIDSS user (Human, VET, Lab, AVR) and AVR Advanced trainings
- IT Specialist and System Administrator trainings

EIDSS IT Training Materials

The EIDSS program has end user and system administrator manuals for the current software versions available in the host country language. The current versions of the online user manuals are also available. During the final transition, these manuals will be delivered again in an editable format. As each version of EIDSS is deployed the manuals go through a rigorous process of review and revision by the country. In the event additional revisions are needed, the host country will have an editable format in which to integrate any future updates.

During the implementation of EIDSS, the training course materials are developed in local languages and used to administer training first by the B&V in-country trainers and later by host country trainers. As in-country training programs mature, these materials are revised and honed. During the final transition, the most up to date course materials are delivered to the host country in an editable format. The course

materials include lesson plans, lesson guides, exercises, tests, presentations, evaluation and feedback forms, and certificates of completion. Details about all training materials is contained within the EIDSS & PACS C&IT Training Plan.

Training facilities

Training facilities or classroom within the organizations using EIDSS are required to conduct EIDSS training. The host country must decide whether to provide training by regions or within the organizations locations.

Computer Based Training (CBT)

Computer based training is developed for each version of EIDSS. CBT has been used successfully as a new version training substitute. Each CBT is available in DVD/CD format which can easily be reproduced. During the final transition the most recent version of EIDSS CBT will be delivered to the host country or can be downloaded from the EIDSS Open Source portal. How CBT is used is the decision of the host country leadership.

Basic Computer Training

Basic computer training is procured for end users who are not familiar with computers, monitors, keyboards, mice, operating systems, MS Word, MS Excel, etc. B&V does not administer basic computer training, but rather contracts with local providers to administer this training. Basic computer training is a lengthy and expensive endeavor. After full country implementation, it is assumed new users will have basic computer knowledge or can acquire it on their own. In the event that formal basic computer training is necessary, the host country shall identify a local subcontractor to provide these services.

Helpdesk Training

EIDSS is supported by a Helpdesk function started first in the B&V Moscow and in-country offices. The Helpdesk is anchored by sustainable free-ware. As implementation is occurring, in-country support staff are designated by the host country and trained on how to open tickets, monitor status and solve issues. The country will specify the number of host country professionals needed, when the training will occur, and how turnover and rotations will be handled for the Helpdesk. Helpdesk training is explained in detail within the EIDSS & PACS C&IT Training Plan.

IT Specialist Training

Training host country IT specialists is necessary for providing day to day operational support of end users and the performance of administrative functions for all computer applications being deployed, for the proper maintenance of the database, backup and restore, applying new patches from Microsoft and any other related activity defined in the design documents of the computer applications, for supporting computer network, communication network, computer hardware and operating systems. B&V will first train host country professionals to fill these positions and then transition the training program to the host country. IT specialist training is explained in detail within the EIDSS & PACS C&IT Training Plan.

Modification of the software through the Open Source requires certain skills and training. The required skills and recommended training are outside of this document's scope.

6. Transition planning

Transition planning shall include following high-level steps:

1. Finalize a “Transition & Sustainment Plan”
2. Review, edit and approval of country-specific Plans by Government of Georgia
3. Execution of country-specific Plans in Georgia

Following paragraphs describe details of the two final steps of the process described above.

Once the country-specific plan is prepared it should be submitted to respective Ministries or Government Agencies that are responsible for EIDSS Implementation in the country. Ministries shall provide comments to the Plan. When reviewing the plan, Ministries may conduct meetings and invite DTRA representatives and other project stakeholders to provide clarifications on proposed plan. Once all comments from host country government are incorporated, the country-specific plan shall be signed by the in-country DTRO Office Chief and Project Managers from each participating Ministry.

Execution of signed country-specific plan shall include steps in accordance with the country-specific transition matrix. Those steps can be combined into 4 major areas:

1. Administration and Documentation
2. Training
3. IT infrastructure maintenance & support
4. EIDSS software maintenance & support

Timeframe as well as roles and responsibilities for each activity are also described in country-specific sections.

The Transition & Sustainment Plan is developed, in duplicate, in English and Georgian languages, each text being equally authentic.

Duly authorized for the government of
the United States of America

Duly authorized for the government of
Georgia

Ambassador of the United States
of America to Georgia

Prime Minister of Georgia

Appendix A – Country specific plan for Georgia (GG)

A.1. Background

Electronic Integrated Disease Surveillance System (EIDSS) was introduced in Georgia under the framework of the Agreement Between the United States of America and Georgia Concerning Cooperation in the Area of the Prevention of Proliferation of Weapons of Mass Destruction, and the Promotion of Defense and Military Relations, dated July 17, 1997, as extended May 17, 2002, and as amended and extended on October 13, 2009 (U.S.-Georgia Threat Reduction Umbrella Agreement – Georgia) and the Agreement between the Department of Defense of the United States of America and the Ministry of Defense of Georgia Concerning Cooperation in the Area of Prevention of Proliferation of Technology, Pathogens and Expertise related to the Development of Biological Weapons, dated December 30, 2002, as amended March 23, 2004, August 30, 2004, November 3, 2005, June 23, 2006, March 6, 2007, March 5, 2008, August 13, 2009 and August 17, 2011 (Biological Threat Reduction Implementing Agreement - Georgia).

Electronic Integrated Disease Surveillance System (EIDSS) is intended for enhancing the process of collection, transmission, processing and analysis of the data on the infectious disease cases/outbreaks and strengthening of the epidemiological surveillance. The system combines clinical, epidemiological/epizootic and laboratory information within the framework of the integrated database, and allows to conduct analysis of the collected data and as a result helps to increase the quality of decision making with reduced time and use of resources. EIDSS is designed to strengthen and support monitoring and prevention of both human and animal diseases within the One Health concept and allows the ministries to share information.

EIDSS is a distributed database with workstations installed according to the list confirmed by the MoLHSA and MoA. In parallel, EIDSS is a web-based database, which synchronizes with the network of distributed databases. Initial data input is carried out on the infectious disease cases, including reportable diseases – at the district and city Public Health Centers, National Food Agency offices and regional laboratories. All the input data is communicated to the head offices of the National Center for Disease Control and Public Health, National Food Agency and the Laboratory of the Ministry of Agriculture for further processing, analysis and safe storage. The transmission of the data between the centers is carried out in near real-time.

EIDSS is also used to send selected data on the infectious diseases to the information system of the World Health Organization in accordance with the requirements of the International Health Regulations of 2005.

EIDSS is currently deployed at the following sites:

Ministry of Labour, Health and Social Affairs of Georgia – 90 locations:

- Ministry of Labour, Health and Social Affairs of Georgia (MoLHSA)
- National Center for Disease Control and Public Health (NCDC&PH) including 10 regional laboratory branches
- 72 Municipal Public Health Centers (PHCs)
- Ministry of Healthcare of Adjara Autonomous Republic

- 6 TRV Laptops

Ministry of Agriculture of Georgia – 97 locations:

- Laboratory of the Ministry of Agriculture (LMA) including 3 zonal diagnostic laboratories (Tbilisi, Kutaisi, Akhaltsikhe)
- National Food Agency (NFA) including 12 regional divisions, 64 rayon divisions and 1 Mobile Group division
- 8 Laboratory Sentinel Stations
- 9 TRV Laptops

EIDSS network also includes the EIDSS Central Data Repository (CDR) and EIDSS Web servers, both installed physically at the MoLHSA, however utilized by MoLHSA and MoA sites jointly.

A.2. Turn over approach

Turn over approach anticipates gradual transition of sustainment from DTRA and B&V to Georgia from 0% to 100% funding of the Internet, consumables, repair, license renewal (i.e., antivirus software), maintenance and in-country support. The transition timeline and plan are provided in the section EIDSS timeline and plan for transition.

DTRA released the EIDSS source code and compiled application to the public through a portal in January of 2014. The portal is expected to improve system sustainability and provide the reference manuals and some of the training materials for the user's convenience. Furthermore, the sustainment of the EIDSS application will be managed by DTRA using an open source approach through a community under an open source license. This approach will provide transparency of the application and allow Georgia to use the products provided in the EIDSS portal.

A.3. EIDSS sustainment recommendations

Collaboration between MoLHSA and MoA

It is recommended that MoLHSA and MoA form a joint Working Group represented by POC from each agency that shall meet to discuss scope and issues with cooperation and joint EIDSS use. Along with promotion of One-Health concept and joint analysis of zoonotic disease data and situation in the country, cooperation of MoLHSA and MoA on EIDSS-related topics will allow the ministries align their policies on data sharing and notification, improve EIDSS implementation through coordination of expectations and efforts.

It should also be taken into consideration that EIDSS provides cross-ministry notifications, information access (with limitations to personal data as per host nation legislation), and joint analysis capabilities, which can be maximized through correct utilization of respective EIDSS modules. It is recommended that the joint Working Group work on improvement of cross-ministry information exchange, especially on zoonotic diseases and other diseases of interest, and joint analysis using EIDSS capabilities, e.g.: MoLHSA sites can benefit from use of Veterinary Module to obtain information on veterinary cases registered in the country, their status and location, similarly MoA sites can benefit from use of Human Module to obtain information on human cases registered in the country, their status and location, which in its place will allow both MoLHSA/MoA sites to better utilize Outbreaks Module for improved tracking of

outbreaks of zoonotic diseases. Joint analysis can be enhanced through use of respective queries/layouts available in AVR module of EIDSS.

IT support

It is recommended that MoLHSA/MoA use existing IT department capacity to perform EIDSS infrastructure support & maintenance. Existing IT department representatives have undergone trainings and have expertise of operating/managing/administering EIDSS.

Cooperation with WHO/FAO/OIE

It is recommended that MoLHSA and MoA work on electronic data linkages between EIDSS and electronic reporting systems of WHO/FAO/OIE. Electronic data exchange modules with international organizations will provide for fast, user-authenticated reporting tool and will improve reporting capacities, as well as promote improved data quality in EIDSS.

Transition to Web EIDSS

MoLHSA and MoA with Black & Veatch shall target gradual transition to EIDSS Web. The first stage of transition, which involved all sentinel sites (sites with single workstation) was completed in December 2015. It is recommended that MoLHSA and MoA continue transition to EIDSS Web for sites with multiple workstations (e.g. ZDLs, LSSs), especially those located in regions for the purpose of minimizing support/maintenance costs/efforts.

Integration with HMIS

It is recommended that NCDC&PH under MoLHSA continue implementation of electronic data linkage with various modules of Health Management Information System (HMIS). This will allow to integrate EIDSS into the overarching electronic network of MoLHSA and provide for fast and improved data reporting from healthcare provider level to public health level.

Sustainment cost estimates

The planned implementation scope will require annual sustainment as follows:

- 1) Annual Communications Cost (Internet and helpdesk telephones):
 - Internet for MoLHSA sites - \$51,540
 - a. MoLHSA (including Web servers): $\$742 * 12 \text{ months} = \$8,904$
 - b. NCDC&PH and regional branches (10 sites): $\$2,720 * 12 \text{ months} = \$32,640$
 - c. NCDC&PH TRV laptops (6 sites): $\$78 * 12 \text{ months} = \936
 - d. Municipal PHCs (50 sites; the rest 22 municipal PHCs are already covering the Internet costs): $\$755 * 12 \text{ months} = \$9,060$
 - Internet for MoA sites - \$29,820
 - a. LMA ZDLs (3 sites): $\$747 * 12 \text{ months} = \$8,964$
 - b. LMA ZDL TRV laptops (4 sites): $\$52 * 12 \text{ months} = \624
 - c. LMA LSSs (8 sites): $\$621 * 12 \text{ months} = \$7,452$
 - d. NFA regional/district offices, TRV laptops (82 sites): $\$1,065 * 12 \text{ months} = \$12,780$
 - Helpdesk phones for MoLHSA (4 phones): $\$42 * 12 \text{ months} = \504

This cost is based on currently charged rates in Georgia. The cost drivers are the number of channels used by the sites as well as the usage rates charged by providers. The usage rates (tariffs) tend to decrease over time. There is no reliable data regarding the future rates.

- 2) Annual renewal of antivirus subscription, EIDSS website domain, SSL certificate, monitoring tools and DNS hosting for existing sites - \$9,913
 - Antivirus licenses for MoLHSA sites - \$3,075; (97 antivirus licenses procured for NCDC&PH regional branches and MoLHSA)
 - Antivirus licenses for MoA sites – \$985 (31 Antivirus licenses procured for LMA and NFA regional branches with server equipment (28 LMA at \$890 and 3 NFA at \$95))
 - EIDSS website domain – \$15 (for all MoLHSA and MoA sites)
 - SSL certificate –\$200 (for all MoLHSA and MoA sites)
 - Monitoring tools – \$5,580 (for all MoLHSA and MoA sites)
 - DNS hosting – \$58 (for all MoLHSA and MoA sites)

This may increase or decrease based on suppliers' pricing policies.

- 3) Consumables for existing sites (cartridges, paper, etc.)
 - MoLHSA sites - \$11,850
 - MoA sites – \$15,850

This is an estimate based on actual costs to date. The actual cost will be based on the amount of printing.

- 4) Labor cost for technical maintenance and support.
 - Support of EIDSS in Georgia will require ~2-3 FTEs for MoLHSA and ~2-3 FTEs for MoA sites or an outsourcing contractor with full-time responsibility for EIDSS maintenance and support.

NB: USD to GEL exchange rate GEL = GEL 2.39 per USD 1; all above costs include 18% VAT.

Additional cost will be incurred if MoLHSA/MoA decides to upgrade EIDSS to new equipment (optional). Typical refresh cycle is 5 years but it will be MoLHSA/MoA choice whether and when to do it. Historically the cost of new equipment of similar computational power tends to decrease and different manufacturers' products vary in price. A staggered approach for equipment refreshment is recommended to split the budget required to replace equipment throughout the system prolonged operations. Maintenance cost of refreshed equipment will decrease due to warranty. The cost drivers are actual equipment purchased, manufacturers, infrastructure, environment quality and actual use.

The table below shows the total EIDSS infrastructure estimated cost and Internet communication lines cost historically in 2012 (year of full EIDSS infrastructure inception) against current costs in 2015.

While hardware costs do not change significantly through time, it must be noted that prices on certain items may vary, e.g.: barcode printer price \$670 per item in 2010 vs. \$430 per item in 2014. Equipment availability for purchase on local market should also be considered as one of the cost drivers along with manufacturer changes to equipment models, e.g. multi-part desktop workstations are gradually replaced with all-in-one desktop workstations that tend to cost less.

The table below shows historical increase in Internet communication lines costs for MoA, which was driven by constant improvement of Internet channels (technology, bandwidth) at MoA sites. It is recommended that the host nation take into consideration that improvement of Internet channels is associated with higher costs; if alternative ISP is considered during planned improvement it should also be noted that new Internet line installation costs tend to be high, while organizational matters (obtaining licenses on installation) result in prolonged periods of negotiation. At that, it is still recommended for the host nation to perform regular (at least once year) analysis of the Internet market, especially within services provided under the ISP that is already contracted (installation of new lines not required), since same types of services tend to decrease in price or new service packages may emerge under lower prices. It should also be considered that Internet service prices are tightly dependent on GEL to USD exchange rate and fluctuations of the exchange rate may cause change in Internet service prices.

Table A.1. Hardware and Internet Channels historical and current costs

	2012	2015
MoLHSA Hardware	\$535,500	\$555,000
MoLHSA Internet channels	\$56,471	\$51,540
MoA Hardware	\$425,000	\$410,000
MoA Internet channels	\$23,556	\$29,820

NB: All above costs include 18% VAT

A.4. Timeline and plan for transition

Table below describes detailed list of activities that need to be accomplished in order to transition EIDSS to the Government of Georgia (GoG).

Table A.2. EIDSS transition activity list

Task		Scope	Target Completion Date and Status		
			MoLHSA	MoA	Status
Administration and Documentation					
1.1	Project Manager	Government of Georgia shall appoint Project Manager for EIDSS implementation and support	April 2016	April 2016	Not Started
1.2	Working Group	Government of Georgia shall form a Working Group(s) that will be responsible for resolution of issues related to EIDSS implementation and support, before and after transition period	May 2010	May 2010	Complete
1.3	EIDSS guidelines, instructions	In-country Working Group(s) and Black & Veatch shall prepare a document that provides description on how EIDSS shall be used in the country	May 2016	May 2016	In Progress
1.4	Order to establish official status of EIDSS	It is recommended that Government of Georgia releases an order that provides EIDSS an official status of government system for disease surveillance	May 2012	April 2016	Completed for MoLSA; In Progress for MoA
Training					
2.1	Identify Training Manager(s)	Government of Georgia Project Managers shall appoint person that will be responsible for EIDSS training management	April 2016	April 2016	Not Started

Task		Scope	Target Completion Date and Status		
			MoLHSA	MoA	Status
2.2	Provide training materials	Black & Veatch shall provide electronic copies of all training materials to the training User Manual, Training presentation, Exercises, Lesson Outline, Certificates of completion. Black & Veatch will be providing Computer base training (CBT) materials for future versions of EIDSS in English and Georgian languages, as well as procedures on how to translate CBT into host-country language. Government of Georgia shall take responsibility of creating CBT in local language if necessary. It is recommended the GoG work towards establishing remote training tools/environment to simplify training delivery process and build platform for refresher training solution (options include but are not limited to intranet, e-training tools, etc.)	April 2016	April 2016	In Progress
2.3	Provide access to online training tracking system	Black & Veatch shall provide access to online training tracking system to personnel designated by in-country Project Manager and Training Manager. Each GoG agency shall make a decision on use of the online training tracking system.	April 2016	April 2016	Not Started
2.4	Provide access to online user testing system	Black & Veatch shall provide access to online user testing system to personnel designated by in-country Project Manager and Training Manager	April 2016	April 2016	Not Started
2.5	Identify in-country trainers	Government of Georgia shall appoint Trainers selected from personnel of the Ministries	March 2015	March 2014	Completed
2.6	Train and certify trainers	DTRA shall train and certify appointed trainers	April 2015	August – October 2014	Completed
2.7	Provide ERT	Government of Georgia shall be taking responsibility for all ERT	July 2016	July 2016	In progress
2.8	IT Training	DTRA shall provide for one-time training of IT specialists appointed by GoG agencies. The training shall be used to fill any potential gaps of IT specialists employed at GoG agencies to develop required knowledge for EIDSS sustainment by GoG. GoG shall take action to finalize the trainees list no later than one month before the actual training start. GoG shall work on maintaining the trained IT specialists as part of respective GoG agencies' staff after completion of the training. The list of trainings and anticipated trainee numbers are provided in the Appendix C of this document, while recommended IT specialist skills are provided in Table 6 of this document.	May 2016	May 2016	Not Started
IT infrastructure maintenance & support					
3.1	M&S Plan	DTRA shall provide Government of Georgia with Maintenance & Support Plan and procedures	May 2016	May 2016	Not Started

Task		Scope	Target Completion Date and Status		
			MoLHSA	MoA	Status
3.2	As-built documentation	Black & Veatch shall provide Government of Georgia with up-to-date As-built documentation for all EIDSS sites in the country for which As-built document is created	May 2016	May 2016	Not Started
3.3	Transfer of ownership (TOO)	DTRA and Black & Veatch shall conduct TOO to Government of Georgia for all equipment provided for EIDSS implementation under CBEP	July 2016	July 2016	Not Started
3.4	Deployment Guides	Black & Veatch shall provide Government of Georgia with EIDSS Deployment Guide documentation that describes procedures for EIDSS sites deployment; training shall be conducted for in-country IT representatives in accordance to the guidelines	May 2016	May 2016	Not Started
3.5	Provision of consumables	Government of Georgia shall be taking responsibility for provision of paper, barcode labels, cartridges and other consumables required for proper functioning of EIDSS	July 2016	July 2016	Not Started
3.6	Equipment maintenance	Government of Georgia shall be taking responsibility for procurement and replacement of spare parts and repairing broken equipment	July 2016	July 2016	Not Started
3.7	Communication channels	Government of Georgia shall be taking responsibility for provision of communication channels (Internet) at all EIDSS sites	July 2016	July 2016	Not Started
3.8	Equipment refresh	Government of Georgia shall be taking responsibility for procurement and deployment of new equipment instead of outdated. Equipment refresh shall be performed as frequently as required by Government of Georgia	July 2016	July 2016	Not Started
3.9	Adding new EIDSS sites	As necessary Government of Georgia shall be procuring and deploying equipment required for new EIDSS sites	July 2016	July 2016	Not Started
3.10	COTS software licenses renewal	Government of Georgia shall be taking responsibility for renewal of outdated commercial-off-the-shelf software licenses. New licenses might be also needed when newer version of EIDSS require new version of the COTS software. List includes, but not limited to, SQL Server, Antivirus, MS Office, Operating System and other software products as necessary	July 2016	July 2016	Not Started
EIDSS software maintenance & support					
4.1	Provide access to online Helpdesk system	Black & Veatch shall provide Government of Georgia with online Helpdesk system	May 2016	May 2016	In Progress
4.2	Provide access to remote access TeamViewer system	Black & Veatch shall provide Government of Georgia with access to remote access TeamViewer system. Government of Georgia shall take responsibility for licenses renewal if decides to use the system	May 2016	May 2016	In Progress
4.3	Train and certify Helpdesk specialists	Black & Veatch shall train and certify Helpdesk specialists appointed by Government	March 2011	May 2016	Complete for

Task		Scope	Target Completion Date and Status		
			MoLHSA	MoA	Status
		of Georgia			MoLHSA; in progress for MoA
4.4	Provide Helpdesk/Support phones to support personnel	Provide and maintain cell phones to Helpdesk specialists for communication with users	April 2016	April 2016 (NFA)	In Progress
4.5	Ongoing user support	Ongoing user support shall be conducted by certified in-country Helpdesk specialists for all issues	May 2016	May 2016	In Progress
4.6	EIDSS Application Code Maintenance	DTRA will work to identify strategy for EIDSS application code maintenance beyond April 2016 till 2021 and will notify the Government of Georgia	January 2021	January 2021	In Progress

A.5. Certification and Accreditation renewal

No country-specific certification or accreditation requirements have been levied by the Government of Georgia. It is recommended for the agencies of the GoG to keep track of legislative changes in regards to certification and accreditation processes to be fully compliant with any changes that may be introduced in the future.

Appendix B – Country specific critical hardware list for Georgia (GG)

Table B.1. Critical hardware list

1. Central Data Repository (CDR) (1 site)	Equipment Model
1.1 Servers	
1.1.1 CDR Server	HP ProLiant DL 380p G8
1.1.2 Primary AD server	HP ProLiant DL 120 R07
1.1.3 Backup AD server	HP ProLiant DL 120 R07
1.1.4 Monitoring server	HP ProLiant DL 320 G6
1.2 Network Equipment	
1.2.3 Switch	HP ProCurve 2610-48
2. Web Service (1 site)	
2.1 Servers	
2.1.1 WEB server Host #1	HP ProLiant DL 380 G7
2.1.2 WEB server Host #2	HP ProLiant DL 380 G7
2.2 Network Equipment	
2.2.1 Firewall Primary	Cisco ASA 5525-X
2.2.2 Firewall Backup	Cisco ASA 5525-X
2.2.3 Border Router Primary	Cisco 2911
2.2.4 Border Router Backup	Cisco 2911
2.2.5 Switch Primary	Cisco Catalyst 3560
2.2.4 Switch Backup	Cisco Catalyst 3560
3. Second-Level (SLVL) (14 sites)	
3.1 Server	
3.1.1 SLVL Server	HP ProLiant DL 380 G6/G7
3.2 Network Equipment	
3.2.1 Border Router	Cisco 2811/Cisco 2911
3.2.2 Switch#1	HP ProCurve 2610-24/HP ProCurve 2610-48/HP ProCurve 2620-24
3.3 Power Protection	
3.3.1 UPS	APC Smart-UPS XL Modular 1500VA 230V Rackmount/Tower

Appendix C – IT training plan for Georgia (GG)

#	Training Course Name	Trainee Agency and trainee numbers
1	CompTIA Security+ or/and CompTIA Server+;	MoLHSA – 1 trainee NCDC&PH – 4 trainees MoA – 1 trainee LMA – 1 or 2 trainees NFA – 2 trainees
2	Installing, Configuring, Troubleshooting and Supporting Microsoft Windows 7 client (Associate level);	
3	Planning and Managing Windows 7 Desktop Deployments and Environments (Associate level);	
4	Installing and Configuring Microsoft Windows Server 2008 (2012) (Associate level);	
5	Administering Microsoft Windows Server 2008 (2012) (Associate level);	
6	Configuring Advanced Windows Server 2008 (2012) Services (Associate level);	
7	Administering Microsoft SQL Server 2008 (2012) Database (Associate level);	
8	Implementing a Data Warehouse with Microsoft SQL Server 2008 (2012) (Associate level);	
9	Server Virtualization with Windows Server Hyper-V and System Center;	
10	Interconnecting Cisco Networking Device Part 1 (Entry level).	
11	Administering the Web Server (IIS) Role of Windows Server	