

Cold chain equipment inventory made easy using the Inventory and Gap Analysis (IGA) application



World Health
Organization

Launching of the WHO IGA system

15 December 2021

Objectives:

- ❑ To introduce the new WHO web-based and mobile-based equipment Inventory and Gap Analysis (IGA) application.
- ❑ To demonstrate the different functionalities, reports and uses of the IGA application.
- ❑ To learn from the experiences of Georgia, the first country to use IGA nationwide.
- ❑ To listen to your suggestions on how IGA can be further improved.

Webinar Programme:

5 min	Introduction of the webinar and speakers	Maricel Castro (WHO)
10 min	Overview and introduction to IGA application	Solo Kone (WHO)
20 min	Functions and reports of IGA application	Mojtaba Haghgou (Consultant)
10 min	Georgia experience and lessons learned	Irakli Gabisonia (MOH Georgia)
15 min	Question and Answer	Maricel Castro (WHO)

Speakers and Panelist:



Engr. Solo Kone

Team Leader, Vaccine Supply Chain and Logistics Team, WHO HQ/IVB/EPI



Engr. Mojtaba Haghgou

Consultant, IGA application developer and former WHO/UNICEF Technical Officer



Mr. Irakli Gabisonia

EPI Manager, Ministry of Health, Georgia



Mr. Amjad Hiary

Consultant, IGA application and Founder and CEO, "I See for Information Technology" (ISEET) Company



Engr. Mohammad Shadan

Program Developer, Inventory and Gap Analysis (IGA) and web-based Vaccination Supplies Stock Management (wVSSM) applications

Inventory and gap analysis application version 1.0



Test version for demo site link:
www.inventory-gapanalysis.com

Username: admin
Password: 123

Mobile application link
(only for Android):
http://www.inventory-gapanalysis.com/mb/IGAS_2.7_GEO.apk

World Health Organization INVENTORY AND GAP ANALYSIS SYSTEM (საჯაროვლო - GEORGIA) VER 1.0

DCJEC - Central Warehouse

administrator

- Home Page
- Facilities
- Items
- Human Resource
- Report
- Users
- Settings

English

Items: Cold chain equipment, Cold room. 11 Items, 100 % Working

Facilities: DCJEC - Central Warehouse. 62 Subset facilities, 40 % Defined

Download mobile application on your mobile phone (Android) from: http://inventory-gapanalysis.com/mb/IGAS_2.91_DEMO.apk

Facilities

Level	Level Name	Total number of facilities	Total number of sub-facilities	Number of Defined sub-level facilities
2	Regional	6	167	126
3	Municipal	63	855	1020
4	Vaccination point	1102	367	0

Total number of sub-facilities							
Facility name	Level	Level Name	Registered (%)	Total	Last changes on	Last login	
1 DCJEC - Central Warehouse	1	Regional	25 (40 %)	62	12/10/2021	27/09/2021	

Overview and introduction to IGA application

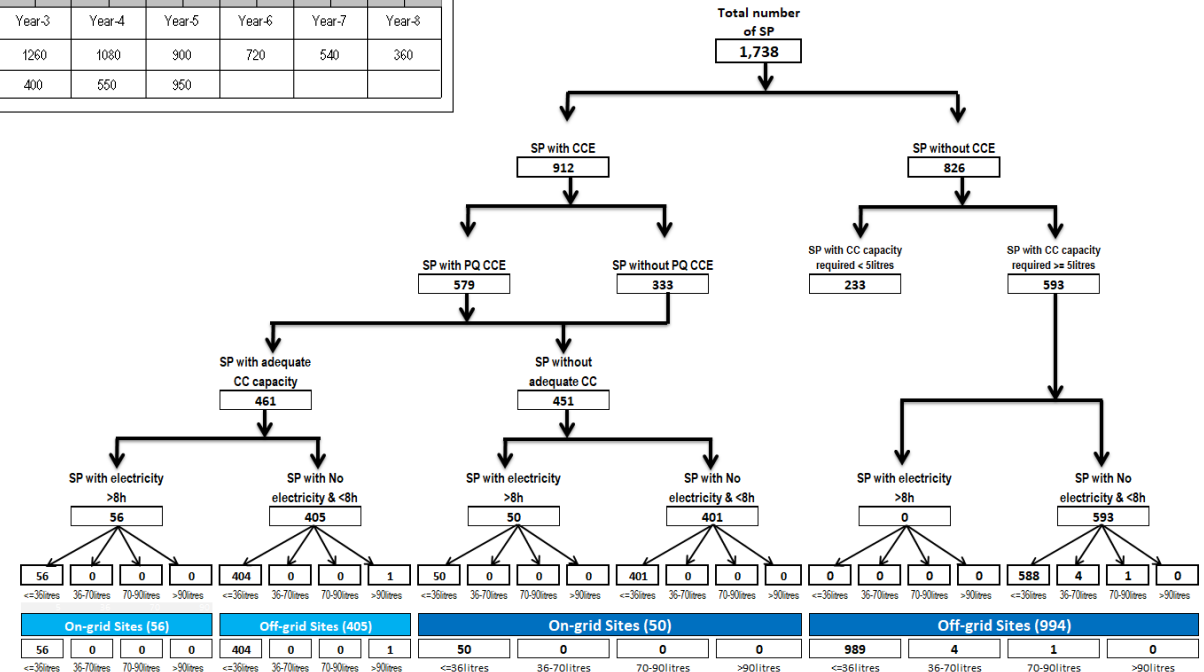
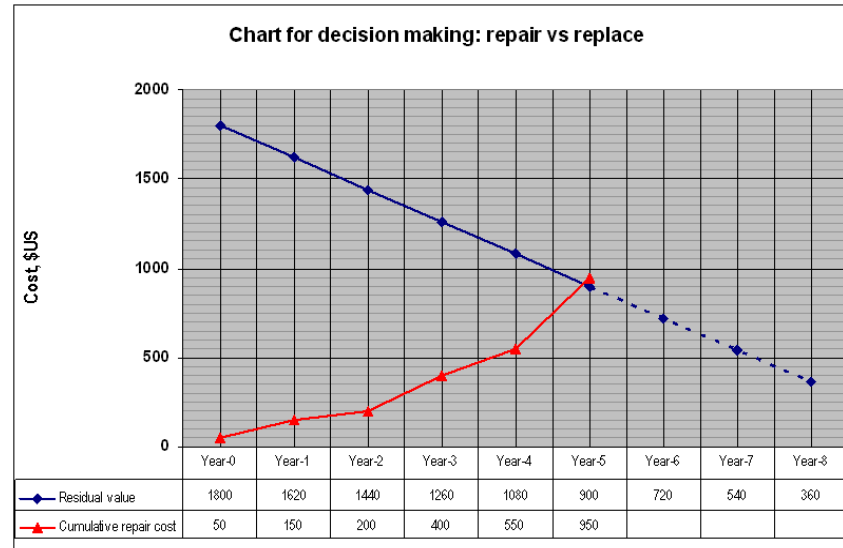


Solo Kone

WHO HQ

Cold chain equipment inventory - purpose

- Know your assets: what, where, in what condition
- Use the knowledge of equipment for planning & implementing vaccination activities
- Plan & implement maintenance to ensure the availability of equipment in good operating condition & optimal cost
- Consistent planning – timely rehabilitation of equipment (extension, expansion & replacement)



Inventory of equipment – methods & data...

Methods/data sources

Visit each piece of equipment:

- Good quality data
- Reliable data
- Long & costly to implement

User's collected data:

- Low cost & rapid to implement
- Challenge on data quality (validation may be required)

Procurement collected data:

- Good insight on total incoming
- No details on location & functional status
- Low cost

Data to be collected

- Location
- Equipment id:
 - Category/Type
 - Make & Model
 - Energy source
- Nominal outputs:
 - Storage capacity
 - Power
- Age/Year of installation
- Functional status:
 - Functioning well (FW)
 - Need repair (FNR)
 - Not functional (NF)
 - Decommissioned (DC)
 - Not installed (NI)

Frequency

Equipment inventory should be kept up-to-date

A physical check (confirmation) must be conducted at least once annually

Categories & Types of equipment...



Cold chain

- Active cold chain:
 - Refrigerators
 - Freezers/ULT
 - Cold/freezer rooms
- Passive containers:
 - Cold boxes
 - Vaccine carriers
 - Special containers
- Coolant packs:
 - Water/ice (+5°C)
 - PCMs (temp.)

Transport

- Vehicles:
 - Trucks
 - Lorries
 - Pick-ups
 - Cars,...
- Others
 - Motorbikes
 - Boats
 -

Office/IT

- Computers:
 - Laptops
 - Desktops
 - Printers
- Communication IT:
 - Fixed phones
 - fax
 - UPS

Others...

- xxx
 - ...
- yyy...:
 - ...

CCE Inventory Management - common misconceptions

Update challenge

- Real time data inexistent
- Central level/donor oriented:
- Tedious process leading to huge inventory cost
- Difficult to sustain due to disconnected data platforms (paper-based, excel spreadsheets,...)

Analytics

- Incomplete data analysis, mostly few statistics (type/make/model, energy, age, functionality, etc.)
- Equipment oriented without facility needs
- Capacity gap analysis limited or inexistent

Continuous management

- Limited scope (categorization, data fields,)
- Disconnected from maintenance operations
- Monitoring of capacity utilization/occupation

IGA conception addresses most of these issues.



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Cold Chain Inventory and Gap Analysis (IGA) tool in Georgia

2021



Cold chain in Georgia (Short description)



Population - 3 728 600

Total surface area - 69,700 square kilometres

Geographical distribution - 9 regions, 62 districts.



- At the national level, immunization is under the overall responsibility of the **Ministry of Labour Health and Social Affairs of Georgia (MoLHSA)**;
- The **Social Service Agency** is responsible for financial flows;
- The **National Centre for Disease Control and Public Health (NCDCPH)** is responsible for vaccine procurement, logistics, management, monitoring activities and vaccine preventable disease surveillance.
- Vaccine logistics are managed by the NCDC at the national level, while these responsibilities are carried out by the district **Public Health Centers (PHCs)** at the district level.

IGAS tool Introduction & Planning



- The tool was introduced to Georgia in August 2021 by WHO.
- NCDC has assembled a team of 6 specialists to collaborate with WHO representatives to plan the implementation of the IGAS tool.
- Policy decisions, including who should collect and import/analyze data, what data should be collected, where/when it be collected etc. were made by the NCDC.
- It was decided that the tool should be available for the first 3 levels, excluding only vaccination points.
- The planning phase included:
 - Planning a project schedule (timeline)
 - Procurement of additional equipment (laptops)
 - Translation of the app and web platform into Georgian
 - Filling out the required data and information forms at the admin level
 - Adjusting application to the needs of Georgia
 - Trainings for the national team

Adjusting the tool to the needs of Georgia

A lot of different information regarding facilities, equipment and human resources can be collected and analyzed using the tool.

Even though, adjustments can be made through the process (at any convenient time), it was important to know what information is the most valuable for the country to have access to.

Defining what information to collect beforehand allowed Georgia to follow the schedule and start the “assessment” process as planned.

It is important to decide:

- Which information is important to be collect;
- What additional information would be preferable to have access to (but not necessary);
- What information is not important in specific case;
- Do not miss adding/defining important information.

Implementation team

The IGAS implementation team in Georgia included:

Project manager (1)

To collect/import data during the pilot project in Tbilisi;

To collect/import data from district & regional warehouses;

Train district and regional warehouse staff;

Final Evaluation and Correction of the imported data

Central level staff (5)

To collect/import data during the pilot project in Tbilisi

To collect/import data from district & regional warehouses;

Train district and regional warehouse staff;

Monitoring visit at the regional and district level

Regional and district level staff (74)

To collect/import data from vaccination points in respective districts/regions;

Schedule

Task	Days	Staff
Adaptation of the application to the requirements of Georgia *		
Cold chain inventory at vaccination sites in Tbilisi	14	6
Cold chain inventory in regional and district warehouses	20	6
Staff training at each warehouse (74)	20	6
Cold chain inventory at vaccination points at regional and district level in Georgia	14	74
Monitoring visit at the regional and district level	7	6
Evaluate & correct imported data	5	6
Total	60	

Pilot project

The pilot project was planned to help us to determine what additional changes needed to be made to the tool, find ways to simplify the process, fix some minor bugs and minimize issues before we started a full project.

During the pilot information was collected and imported for 50% of the vaccination points in Tbilisi (About 65 facilities)

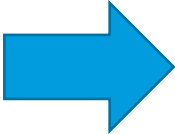

During the pilot, part of the adjustments included:

- Some minor issues with translation was corrected;
- Excel spreadsheets, containing same information as the tool, was developed in case of internet flaws;
- Decision to remove coolant packs ;
- Decision to remove dry storage;
- Identified data that could be imported to the tool prior visiting the facility;

Trainings

Training of the central level staff was provided by the WHO (Online training)

Trainings for regional and district warehouses (at least one staff at each location) were carried out by 6 specialists from the central level (NCDC).

- 1) The Regional/District warehouse staff was trained on using the tool at their desk computer/laptops 
- 2) Later, together with the trainee, information regarding the equipment of the particular warehouse was collected and imported into the tool 
- 3) The trainee, together with the trainer visited the nearest vaccination point for the assessment; The process was carried out by the trainee alone, under the supervision of a trainer.

Auxiliary equipment & Server

Georgia has mainly used Tablets and Laptops during the process. In only a small number of facilities the excel spreadsheets/paper documents or smartphones were used.

Android tablets and laptops are ideal to work with the tool. Since smartphones have small screens and sometimes it is more difficult to navigate, it was considered as the last option.

Server:

Before the data import is finished, the tool will be installed on the WHO server, Thus, it will be easier for developers to support us in case of errors or bugs

After data import and validation is finished, the tool with all the information will be transferred to the local secure server at NCDC.



Pros

- Access to updated data (live) and information regarding facilities and equipment;
- Access to the information anytime, anywhere;
- User type-based access to different data by level or facility;
- Ability to edit/change data anytime;
- Information saved on local server;
- Different type of reports;
- Mapping, visualization;
- Multilingual;
- User-defined & User-friendly;

&

Cons

- Minor bugs;
- Time and resources for trainings;
- App available only for Android systems;
- Needs the internet access;





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Way forward:

Further improvement on IGA application

Interoperability of IGA with the following tools:

- ✓ EVM 2.0
- ✓ WHO Supply Chain Sizing Tool
- ✓ WHO Cold chain equipment inventory and gap analysis tool

We are also exploring for IGA to be interoperable with other CC inventory application such as, PATH ODK CCEI tool

Server maintenance to support countries planning/preparing to use IGA.

Question and answer

Thank you