Application Form for Cold Chain Equipment Optimisation Platform support in 2019

Document Dated: 03rd September 2019

CCE Application Form	**Purpose of this document:** This application form must be completed in order to apply for support related to the CCE Optimisation Platform. Applicants are required to read the **Application guidelines** and **How to request new Gavi support** documents. Thereafter, applicants should complete this CCE Application Form and submit by email to proposals@gavi.org.
CCE TG 	**Resources to support completing this application form:** **Technology guide for equipment selection** for counties wishing to request CCE Optimisation Platform support is available here: www.gavi.org/support/hss/cold-chain-equipment-optimisation-platform/ **Extensive technical resources** relating to vaccine cold chain equipment management are available on TechNet-21: www.technet-21.org/en/resources/cold-chain-equipment-management
Weblinks and contact information: All application documents are available on the Gavi Apply for Cold Chain Equipment support webpage: http://www.gavi.org/support/process/apply/cceop/. For any questions regarding the application guidelines please contact countryportal@gavi.org or your Gavi Senior Country Manager (SCM).	

	Countries are informed that based on post IRC recommendations, **final approved amounts may be different** from what countries have requested. **This final approved amount will be dependent on the availability of funding.** **Gavi will respect countries' equipment selection. However, countries could also receive their 2nd or 3rd preference based on their selection in the budget.**

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PART A: APPLICANT INFORMATION

1. Applicant information		
Country	*Uganda*	
Date	03rd September 2019	
Contact name	**Dr. Driwale Alfred** EPI - Programme Manager Ministry of Health Uganda	
Email address	Driwalealfred2019@gmail.com	
Phone number	+256 772 515 222	
Total funding requested from CCE Optimisation Platform **(US $)**	*This should correspond exactly to the budget requested in the embedded template.* ***5,331,375 USD***	
Does your country have an approved Gavi HSS support on-going?	Yes [X]	No [ ]
	*Indicate the anticipated **final year** of the HSS 2: **30th June 2020***	
Proposed CCE Optimisation Platform **support start date** *(please be informed the actual start date should be at least 8-10 months from application date):*	*Indicate the month and year of the planned start date of the support, based on the strategic deployment plan:* ***July 2020***	
Proposed CCE Optimisation Platform support end date:	*Indicate the month and year of the planned end date of the support, based on the strategic deployment plan:* ***December 2021***	
Signatures *Include signed (and official) CCE Optimisation Platform application endorsement by:* *a) Minister of Health and Minister of Finance (or delegated authorities)*	*We the undersigned, affirm the objectives and activities of the Gavi CCE Optimisation Platform proposal are fully aligned with the national health strategic plan (or equivalent) and that the funds for implementing all activities, including domestic funds and any needed joint investment, will be included in the annual budget of the Ministry of Health:* **Minister of Health (or delegated authority)** **Minister of Finance (or delegated authority)** Name: Name: Signature: Signature:	

b) *Members of the Coordination Forum (HSCC/ICC or equivalent body)*	Date:	Date:
	ICC Review Meeting Attendance List attached.	

PART B: MANDATORY ATTACHMENTS: NATIONAL STRATEGIES AND PLANS

This section provides a list of national strategies, plans and documents relevant to supply chain and requested support, which must be attached as part of the application.

☆	All documents listed in the table below are **mandatory**, must be **attached** to your application, and they must be **final** and **dated**. Only **complete applications** will be assessed.

2. Mandatory attachments					
No.	**Strategy / Plan / Document**	**Attached Yes/No**	**Final version (dated)**	**Duration**	**Comments**
1	Signature sheet for the Minister of Health and Minister of Finance, or their delegates	Yes			
2	Minutes of the Coordination Forum meeting (ICC, HSCC or equivalent) endorsing the proposal[1]	Yes			
3	National Health Sector Development Plan/ Strategy (or similar)	Yes	2015	2015/16 - 2019/20	
4	cMYP	Yes		2016 – 2020	
5	EVM Assessment	Yes	October 2018	2018 - 2022	
6	EVM Improvement Plan	Yes	October 2018	2018 - 2022	
7	EVM Annual Work plan and Progress Report on EVM Improvement Plan[2]	Yes	October 2018	2018 - 2022	
8	WHO CCEI Tool/UNICEF IMT/PATH CCEM Tool/CHAI tool[3,4]	Yes			
9	Inventory Report and Facilities segmentation	Yes	July 2019		

[1] In the case of HSS and CCE Optimisation Platform requests, minutes must reflect that both were discussed and endorsed.
[2] The EVM IP and annual work plan progress report must have been updated within three (3) months before applying for Platform support.
[3] The CCE Inventory must have been updated within no more than one (1) year of applying for Platform support.
[4] Tool should allow reviewers to understand targeting of equipment to locations relative to contribution towards improving coverage and equity of immunisation.

2. Mandatory attachments					
No.	**Strategy / Plan / Document**	**Attached Yes/No**	**Final version (dated)**	**Duration**	**Comments**
10	Comprehensive document on CCE needs: Chapter 1: Cold Chain Rehabilitation and Expansion Plan Chapter 2: Projected Coverage and Equity Improvements Chapter 3: Operational Deployment Plan, including deviation plan Chapter 4: Equipment Selection	Yes		2016 - 2020	
11	Maintenance Plan with financing and source(s)	Yes	July 2019	2016 – 2020	
12	Proof of status for CCE tariff exemptions waiver	Yes	2016		
13	Other relevant documents				
14	Lessons learnt from CCEOP phase I	Yes	August 2019		
15	Service availability and Health Facilities Master list Report	Yes	November 2018		
16	JRF Progress Report	Yes	April 2019		
17	CCEOP ODP	Yes	August 2019		
18	CCEOP Budget Final	Yes	September 2019		

3. How do the above strategies, plans and documents inform the CCE Optimisation Platform support request (initial support and scale-up support)? *(Maximum 1 page)*

Countries are encouraged to reference relevant sections of the above documents as much as possible.

Improving immunization coverage is one of the key interventions for achieving a healthy human capital which is similarly reflected by the need to improve infrastructure for cold chain storage in the health sector development plan (HSDP)[5].

One of the cMYP[6] objectives for vaccine supply and logistics is to improve the efficiency and performance of cold chain at national, district and health facility level. At baseline, only 78% of districts had adequate numbers of appropriate and functional cold chain equipment with a plan of increasing the proportion of districts and facilities with adequate numbers of appropriate and functional cold chain equipment to 90% by 2020.

The country developed and submitted the Cold Chain Equipment Optimization Platform grant (CCEOP) in 2016 worth **$10.76m** including the 20% co-finance obligation to procure cold chain equipment with three main objectives:

- To upgrade the current CCE in the country's EPI system to be WHO PQS compliant
- To expand the cold storage capacity for vaccines at all levels of the immunization supply chain system to adequately accommodate all vaccines through 2020
- To improve the quality management system of vaccines and cold chain equipment

[5] Health sector Development Plan – (Annex III) section 3.6.4 pg 70

[6] cMYP – (Annex IV) section 3.0 pg 39

The Ministry secured **$8.3m** for two phases and has successfully received and installed **608** equipment in April 2019 for CCEOP phase one. Not all sites prioritized in phase one were able to receive equipment as indicated in table **1.** Regularly the Ministry conducts equipment inventory assessments to identify CCE gap to inform the next CCE allocation/requirements. The Ministry received a costed operational plan for phase II **(~$5.8m**) where MoH will receive 906 CCE. As a result, a significant number of sites due to receive equipment in phase II will not be able to receive equipment as indicated in the table 1 below including facilities in districts identified with inequities.

Table 1: Quantities for vaccine refrigerators and freezers under CCEOP year 1

Period	**Approved quantities**	**Deployed quantities**	**CCE Gap**
Phase 1	700	608	92
Phase 2	1510	906	604

To ensure 'Reaching Every Community and Every Child', UNEPI conducted a C&E assessment [7]to address existing immunization inequities and to understand the barriers to access and use of immunization. Among the high-risk communities / underserved communities identified were: urban poor settlements, migrants, ethnic minorities, religious sects (especially Muslims, Bisaka sect and triple 6), upcoming town settlements, fishing communities, Refugee communities, remote rural, Island and mountainous communities. Many districts with immunisation inequities have very many Health centre II and new Health Centre III facilities without vaccine fridges. In urban areas, where majority of service providers are private institutions, immunisation services are not commonly offered[8]. The ministry included CCE requirements for the C&E target areas in the proposal, for the Coverage and equity grant. Refer to table below;

Table 2: Breakdown of CCE need

Total current CCE Need	**2,501[9]**
CCE need to be covered by CCEOP1 phase II	906
CCE need to be covered by C&E	310
CCE need to be covered by HSSII	70
Uncovered need	**1,215**

In addition, HSS II grant will fund 70 CCE. The balance indicated in the updated inventory report of 1215CCE is indicative of the need as of July 2019 based on the current immunisation schedule. There is ongoing work to quantify additional CCE to increase on accessibility and increasing storage capacity for MR2, booster doses for TD, Men A introduction, Yellow fever, Hep B and integration of oxytocin into the vaccine cold chain.

[7] Projected Coverage & Equity Improvement Plan – (Annex XII) section 4.5 pg. 30

[8] Uganda Immunization Equity Assessment Report, February 2017; section 4.2 pg. 16

[9] CCE Inventory & Facilities segmentation –(Annex X) Pg. 9

4. Describe how supply chain stakeholders (including Coordination Forum (ICC/HSCC or equivalent), government, NLWG, NITAG, key donors, partners, CSOs and key implementers) have been involved in the application development including if the quorum at the endorsing meeting was met

Does the country have a permanent and functioning National Logistics Working Group (NWLG)? If No, does the country plan to establish one and when?

Gavi and its Alliance partners encourage the establishment of such group that coordinates Government and non-Government partners 'activities and investments related to the health supply chain including immunization.

Were any of Gavi's requirements to ensure basic functionality of Coordination Forums not met? Then please describe the reasons and the approach to address this (refer to section 5.2 of the General Guidelines for the requirements) *(Maximum 1 page)*

Supply chain stakeholder involvement in the application process

In pursuit of this grant, all keys stakeholders including partners, advisory and coordination forums such VMC, TCC and ICC were committed to the development of this application and each played a crucial role as summarised below;

- ***Immunization supply chain supporting partners***; UNEPI, NMS, WHO, UNICEF, CHAI and PATH worked together to consolidate this application
- ***Technical and Immunization Coordination Committee (TCC, ICC)***; the proposal was presented to TCC and ICC for review and approval on 20th August 2019.
- **Vaccine Management Committee**[10][11]; under the monthly meetings of this Committee, there is a standing agenda item that covers CCEOP. The process to develop this application was widely discussed at this Committee, including through dedicated meetings of the CCEOP PMT[12], which is a subcommittee specifically overseeing the implementation of the project

PART C: SITUATION ANALYSIS AND REQUESTED SUPPORT

This section gives an overview of the types of information the IRC will anticipate from countries in their application for CCE Optimisation Platform support. This section must be filled with appropriate reference to the country documents listed in Part B. Countries are required to provide a narrative in response to the following questions.

5. Situation analysis of country's supply chain and CCE (number, distribution, functionalities etc.) *(Maximum 3 pages) Please respond to all questions*

Countries are encouraged to cross reference (document title, page number) attached mandatory documents.

Information is required to cover the following areas:

a) How is the country's immunisation supply chain administered?
b) What weaknesses have been identified in the country's supply chain?
c) Through what interventions are these weaknesses currently being addressed?
d) Describe challenges that are hindering the implementation of these interventions.
e) Describe lessons learnt from recent supply chain related support that inform the current request for CCE Optimisation Platform support.
f) What percentage of facilities have reliable access to grid electricity for up to or more than 8 hours per day?

[10] VMC monthly minutes are attached – (Annex XXI)
[11] Vaccines Management Committee ToRs – (Annex XXII)
[12] Deviation protocol – (Annex XIII)

g) Please give the quantity and percent of current CCE that is: a) functional; b) PQS-approved; c) non-PQS-approved; and/or d) obsolete?

h) What percent of the birth cohort is served by effectively functioning, PQS-approved CCE currently?

i) What are the bottlenecks that CCE can address in the current supply chain set-up (for example, capacity and technology constraints)?

j) Describe any other supply chain challenges that CCE Optimisation Platform support will assist in mitigating?

k) What are the overall CCE needs?

l) Is the country policy to use cool water packs or conditioned ice packs?

a) Uganda's Immunization supply chain[13]

Uganda operates three supply chain levels for immunization namely the national, district and service levels. The district level serves as the lowest distribution (LD) level in the country. Transport system for distribution of vaccines and supplies in Uganda is based on push method between the national and district stores and the main means of transport is by road and water for the island districts.

National level

- ***Vaccine quantification and procurement;*** The country's vaccine needs are quantified using a compiled district vaccine needs estimated using population figures as provided by national census and/or previous consumption of vaccines and related supplies. UNICEF is the procurement agent for vaccines and related supplies while National medical stores together with Vaccines Management Committee oversees the process.
- ***National-level storage and distribution;*** On arrival, NMS handles customs clearance procedures and the vaccines are stored at the central vaccine store. Distribution is then done by NMS to **135 districts** on a monthly basis using the vaccine refrigerated trucks.

District level

- ***District-level storage and distribution;*** The vaccines and related supplies are stored in designated district vaccine stores. The district stores on monthly basis deliver vaccines to service points, however on occasions of inability of the districts to meet up; health facilities do arrange to collect vaccines for service delivery from the district stores. 84% of the districts have district vaccine stores in appropriate structure[14]. The country is undertaking a vaccine last mile delivery pilot project. This will inform the future enhancement of last mile delivery system of vaccines in the country.

Service point level

- Health facility is the lowest level of the logistics system in the country. The health facilities are equipped with the cold chain capacity to store up to 4weeks supply of stock and two weeks' buffer/reserve stock. The EPI refrigerator is maintained in a designated room within the health facility. Service delivery facilities send their reports to district EPI offices which in turn compiled reports and forward to the national level.

b) Immunization Supply chain weaknesses

- ***Unreliable vaccine distribution at last mile;*** In most districts vaccine delivery to the health facilities is still a big challenge. The country is undertaking a vaccine last mile delivery pilot project. The findings and lessons learnt will inform the future enhancement of last mile delivery system of vaccines.
- ***Availability of sub optimal CCE;*** According to the July 2019 inventory, the country still has a gap of 2,483 CCE that are sub optimal - absorption refrigerators, aging equipment and irreparable in the system. There are plans to secure new equipment for replacement followed by withdraw of the sub optimal equipment and final disposal.
- ***Storage capacity gaps;*** In addition to the need to increase cold chain capacity of health facilities to meet 2020 needs, 677 health facilities still lack CCE including remote and hard to reach areas and district vaccine stores for newly created districts.

[13] Immunization in Practice manual – (Annex XXVIII)

[14] EVMA report 2018 – (Annex V) sec. 6.2.1 pg. 23

- ***Human resource gaps at all levels;*** There are several unfilled positions at both national and district level structures. Only 53% of the 128 districts have qualified cold chain technicians[15] while others have unskilled or semi-skilled assigned personnel to assist in this role.
- ***Limited availability and/or implementation of maintenance plans;*** A number of districts and health facilities were found to lack maintenance plans for CCEs hence scoring below the required EVM standards
- ***Inadequate supervision;*** Supervision remains a challenge at the district and lower levels resulting into insufficient reporting on effective vaccines management indicators.

c) Interventions to the above weaknesses

- ***supply chain model for last mile delivery of vaccines;*** NMS with support from UPS and CHAI is piloting the feasibility of last mile vaccine delivery in 3 selected districts. The end term evaluation findings are expected to inform a national decision on the way forward.
- ***Upgrading the current CCE to be WHO PQS compliant;*** Through CCEOP and HSS grants, there is continuous upgrading of the CCE to PQS prequalified equipment in EPI system for better effectiveness and efficiency of the entire UNEPI cold chain system up to the point of service delivery.
- ***Expanding cold storage capacity for vaccines at all levels;*** to adequately accommodate all vaccines through 2020 target in addition to equipping the health facilities in hard to reach areas which currently do not have CCE.
- ***Recruitment and training of cold chain technicians;*** A number of districts have plans for recruitment of qualified cold chain technicians with a few districts already having recruited. MoH together with support from partners have designed a two weeks' hands on training program for newly recruited cold chain technicians on effective vaccine handling and management. There is continuous onsite mentorship and supportive supervision both from national and regional cold chain teams.
- ***Procurement of motorbikes, boats and vehicles;*** Currently, there are 62 districts with cars, 600 motorcycles, 1,500 bicycles at different DVS's and health facilities and 10boats available to facilitate vaccine distribution, outreaches and lower level supervision. The HSS II grant has a provision for procurement of 71 vehicles, 657 motor bikes and 11 mid-sized boats to mitigate the transport challenges hindering lower level distribution and supervision.

d) Challenges hindering the interventions

- ***Last mile delivery of vaccine pilot;*** The pilot is still ongoing, and its scalability is dependent on the evaluation results and availability of funding.
- ***Inadequate funding to meet current CCE capacity need;***
- ***Inadequate prioritisation of cold chain work;*** There is no budget line for cold chain maintenance at the district level and availability usually depends on the district health office's commitment and the capacity of the cold chain officer in advocating for funding.

e) Lessons learnt from CCEOP phase I

- **Prioritisation of SDDs;** The country was facing challenges related to acceptability of the grid models, unstable power supply and payment of power bills. This led to a request to Gavi by the Hon. Minister of health to consider allowing Uganda to mainly solarise the cold chain system.
- **Additional comments are in the lessons learnt extract.** Refer Annex XVII

f) percentage of facilities with reliable access to grid electricity

Table 8[16]: Electricity availability **Availability of Electricity**		
Status	**No.**	**%**
None	2,695	66%
< 8 hours	606	15%
8 to 16 hours	429	11%

[15] According to the UNEPI physical count

[16] CCE Inventory & Facilities segmentation – (Annex X) pg. 17

> 16 hours	343	8%
Total	4,073	100%

g) ***Please give the quantity and percent of current CCE that is: a) functional; b) PQS-approved; c) non-PQS-approved; and/or d) obsolete****?*
There are 4913 functional cold chain equipment, of these 2501 are obsolete[17], 586 are non PQS approved CCE.

h) ***What percent of the birth cohort is served by effectively functioning, PQS-approved CCE currently?*** The administrative data from the Uganda electronic health management information system (eHMIS) 2018 shows that 83% of the birth cohort effectively access immunization services.

i) What are the bottlenecks that CCE can address in the current supply chain set-up (for example, capacity and technology constraints)?

- *Prioritisation of SDDs; The country was facing challenges related to acceptability of the grid models, unstable power supply and payment of power bills. This led to a request to Gavi by the Hon. Minister of health to consider allowing Uganda to mainly solarise the cold chain system.*
- *Enhancing the CCE design to incorporate compartments for oxytocin storage in segregation from Vaccines*

j) Describe any other supply chain challenges that CCE Optimisation Platform support will assist in mitigating?

- *Introduction of CCE with remote temperature monitoring capabilities would improve monitoring equipment performance.*

k) ***What are the overall CCE needs?***

The overall CCE need is 1,215CCE which is indicative of the need as of July 2019 inventory status report. There is ongoing work to quantify additional CCE to increase on accessibility and increasing storage capacity for MR2, booster doses for TD, Men A introduction, Yellow fever, Hep B and integration of oxytocin into the vaccine cold chain.

[17] CCE Inventory & Facilities segmentation – (Annex X) pg 11, 12.

6. Expected immunisation coverage, equity and sustainability results *(Maximum 2 pages)*
Please respond to all questions

Countries are encouraged to cross reference (document title, page number) attached mandatory documents.

Information is required to cover the following areas:

a) How will the requested Platform support concretely contribute to addressing identified geographic and socio-economic inequities and gender barriers to sustainable improvements in coverage and equity of immunisation? Examples may include (not exhaustive):
- *Geographically remote districts or those with low coverage*
- *Poorer communities (e.g. in the poorest 10% of the population)*
- *Communities where gender barriers are significant and/or where low levels of female education is common (as this is often associated with lower coverage)*

b) What analyses have been made, or what plans are underway, to optimise the design of the supply chain distribution system in order to improve the efficiency of the supply chain and contribute to achieving coverage and equity goals?

c) How have these system design considerations impacted the choice of CCE to be supported by the Platform?

d) Concretely, how will Platform support help improve the sustainability of the supply chain system?

a) The national level access to immunisation measured through DPT1 coverage has remained above 95 percent and Drop Out Rate (DOR) has remained below 10 percent showing good immunisation utilisation and access in the last 3 years. However, this seemingly good national immunisation coverage masks districts with inequities in access and utilisation to immunisation. In this same period a total of 23 (13%) districts in 2016, 27 (23%) in 2017 and 21 (26%) in 2018 had DPT1 (access) less than 90 percent and DOR (utilisation) of 10 percent and more in 12 (11%), 13 (11%), and 8 (7%) districts[18]. Despite improving utilisation of immunisation services, access has remained a barrier in immunisation contributing to coverage inequities in the districts. This disparity in access to immunisation is mainly attributed to creation of many new districts and new health facilities without fridges, breakdown of obsolete fridges and episodes of vaccine stock outs at operational level. Introduction of cold chain equipment in new health facilities and replacement of obsolete equipment's will improve cold chain functionality and access to immunisation services.

b) Uganda operates three supply chain levels for immunization namely the national, district and service levels. The district level serves as the lowest distribution (LD) level in the country. Transport system for distribution of vaccines and supplies in Uganda is based on push method between the national and district stores and the main means of transport is by road and water for the island districts. The country is undertaking a vaccine last mile delivery pilot project to test the feasibility and effectiveness of a concept of moving vaccines from the District Vaccines store to the lower health facility. Thereafter a decision will be made on the best model to be adopted in-house/outsourced model.

c) From the July 2019 CCE inventory, 66% of the facilities did not have access to electricity and 15% had less than 8 hours access to electricity[19]. The electricity access has been a challenge and even the facilities with electricity, the power is switched off to minimise on the costs. During the 2018 Joint Appraisal, this issue was raised, and the meeting agreed to the country's request to opt for SDD in the subsequent CCE procurement.

[18] WHO/UNICEF joint reporting form on immunisation – Uganda 2016, 2017, 2018

[19] CCE Inventory & Facilities segmentation – (Annex X) pg.17

d) CCEOP will contribute to closing the vaccine storage gaps identified in terms of replacing suboptimal equipment and improving equity and coverage through extension and expansion of the cold chain capacity. We envisage improvement in functionality, sufficiency and optimality of the CCE. The ongoing last mile delivery project, once evaluated, results will inform redesigning the supply chain system and this will ride on the CCEOP capacity improvement.

7. Maintenance plan (and its source of funding) and equipment disposal *(Maximum 2 pages) Please respond to all questions*

Countries are encouraged to cross reference (document title, page number) attached mandatory documents.

Information is required to cover the following areas:

a) How will the country ensure that aspects of maintaining the cold chain are addressed (e.g. preventive and corrective maintenance, monitoring functionality, technicians, financing for maintenance, etc.)?
- *What is the frequency of preventative and corrective maintenance that the country commits to (supported by partners)?*
- *What technical support is anticipated for maintenance?*

b) How will the country monitor the completion of preventive and corrective maintenance?
- *Which source(s) of funding will be used for maintenance, and to what extent are they assured?*

c) How will the country dispose of obsolete and irreparable equipment replaced by CCE Optimisation Platform equipment?

Ministry of Health is in the process of transitioning cold chain equipment management from UNEPI to NMS with the later having full responsibility for storage, distribution and management of cold chain equipment including repairs and maintenance[20]. This is in line with a directive stated in the executive summary of the Ministerial Policy Statement 2012/2013 and detailed in the 2015 transitional steering committee guidelines. The move is aimed at improving efficiencies for the program to retain a supervisory, training and oversight role. An initial assessment will be conducted to obtain a SWOT analysis of the current maintenance model being used by UNEPI that will inform the possible areas for system redesign and/or optimization of the existing cold chain maintenance model in line with increased investments and numbers of cold chain assets.

Currently, the country continues implementing the existing CCE repair and maintenance plan where;

a) The country plans to ensure maintenance of cold chain through;
- Technical Human resource with skills in maintenance and repair at national regional and district level
- Availability of spare parts
- Provision of tools for performance monitoring at health facility level
- Training and mentorship of CCE users

Preventive and corrective maintenance frequency[21]

Preventive and Corrective maintenance of cold chain equipment at every level of vaccine storage is conducted through the existing government-run structure of national, regional, district and health facility.

[20] TSC Guidelines 2015 (Annex XXXII) Pg. 8

[21] Cold Chain Equipment repair and maintenance plan 2016. Pg. 15, 24

At Health facility level; on daily basis the health workers conduct temperature monitoring, dusting of the refrigerators and a monthly basis, they review temperature data and send completed maintenance tasks to district cold chain technicians for analytics and submission to UNEPI.A t District level; The district cold chain technicians on daily basis conduct temperature monitoring and dusting of the refrigerators at the district vaccine stores. They also conduct monthly equipment servicing, supportive supervision and mentorship of healthworkers.

At regional level; the regional cold chain maintenance teams equally conduct the above maintenance tasks in their respective districts as well as supervision and mentorship in the districts within their regions.

At National level; The national cold chain technicians together with regional technicians conduct installation of new CCE. They conduct repairs at central workshop whenever faulty equipment is delivered from districts.

Anticipated Technical support for maintenance
There has been a number of challenges and limitations with maintenance and repair of CCE such as; inadequate human resource at all levels, timely provision/availability of spare parts, inadequate funding to support planned cold chain management activities, poor reporting. Therefore there is need for Technical support to include;

- Equipping technicians with appropriate tools
- Recruitment and training
- Monitoring systems for improved accountability for spare

b) Funding source for CCE maintenance[22]

Through the HSS II, central and regional maintenance activities inclusive of capacity building have been costed at $ 749,360 to cover all districts in the country and the new regional cold chain structure of maintenance leveraging the existing biomedical workshops. This will facilitate technicians to move to districts and facilities to conduct preventive maintenance and support supervision on a quarterly basis. CCE maintenance at district level is funded through the Primary Health Care funds as part of the immunization funds allocated to districts on a quarterly basis. However, funding released for CCE maintenance is in most cases inadequate to meet all the needs within the district.

c) Disposal of Obsolete Equipment

Decommissioning of old and obsolete CCE
The overall objective is to ensure that all old and obsolete CCE is systematically identified and all components properly disposed-off in line prevailing regulations. The criteria for selecting CCE for decommissioning will be based on the following[23]:

- Over aged beyond manufacturer specified useful life,
- Broken down beyond repair,
- Not complying to PQS parameters
- Not meeting international protocols and local regulations

[22] Cold Chain Equipment repair and maintenance plan 2016 Pg.15&16

[23] WHO guideline for Decommissioning and safe disposal of CCE. Sec 5.1 Pg.7-8 (Annex XXX)

All CCE eligible to be written-off will be identified using reports from the CCEM tool. This will be followed by UNEPI / MoH constituting a Board of survey Team to engage with District Administration to manage de-registration of CCE from District Asset Register. This exercise will generate final list of CCE to be later withdrawn.

MoH has instructed NMS to manage implementation of retrieval and proper disposal of all obsolete CCE. This will be implemented by NMS through contracting a competent firm with proven experience in waste management that should be licensed by the National Environmental Regulatory Authority

To effectively provide an oversight role in managing the contracted firm, a Project Team will be created to provide a contract management role during the contract period. The project team will comprise of members selected from MoH / UNEPI, NMS and Uganda National Environmental Management Authority (NEMA). The NEMA officer is co-opted to provide technical advice on proper handling and disposal procedures of identified environmentally hazardous components from decommissioned CCE.

The implementation will be conducted under four critical phases as outlined below[24]:-

1 **Collection from HF to DVS**	i. Obtain official Letter of Authorization to collect all identified old refrigerators from health facilities ii. Record details of each fridge make, model and serial number per HF visited. Avail audit trail report that will match each equipment per HF and district name. iii. Obtain and keep a signed proof of handover report / form. iv. Move all handed over equipment and forms to collection point at the district headquarters / DVS v. Project Team and District officials shall supervise exercise
2 **Equipment De-registration by District**	• Verify collected equipment with documents signed by HF official(s) • Districts officials (CAO, DHO and audit) to verify collected equipment and approve write-off of asset(s) • Move all written-off equipment to a central collection and sorting yard. • Project Team and District officials shall supervise exercise
3 **Central Sorting Yard**	a) Verify collected equipment with documents signed by district officials b) Logically separate all fridges by model & make c) Use developed algorithm to separate the different components per fridge make/model d) Ensure safe handling of any gaseous, lead containing and acidic components. e) Generate quantities report for all items separated f) Safely pack all hazardous items in preparation for transportation to destruction facility g) Transport hazardous items to destruction facility h) Project Team shall supervise exercise
4	I. Incineration and safe destruction of hazardous and non-biodegradable material

[24] Uganda E-Waste guidelines (Annex XXIX)

Environmentally Safe destruction	II. Obtaining **Certificate of Destruction** to confirm completion of the exercise. III. NEMA to supervise this activity and Issue certificate of destruction

8. Other implementation details *(Maximum 1 page) Please respond to all questions*
Countries are encouraged to cross reference (document title, page number) attached mandatory documents.

Information is required to cover the following areas:

a) How will the country facilitate the manufacturer's or representative's role in equipment purchase, distribution and installation?

b) What is the source of the joint investment and how much from each donor? Is the country's joint investment secured? Please complete the table below

c) If the country joint investment is coming from HSS, is this leading to a reallocation of the HSS budget? If yes, please inform which HSS activities are being replaced by this joint investment?

d) Has the country secured import tariff exemptions for CCE? If yes, attach proof.

a) MOH will provide equipment specifications including serialization, equipment identification, design specification, district level contacts, equipment allocation list and zoning of the country. A letter of introduction of the local representative of the manufacturer will also be issued to the different National and sub national government agencies asking them to collaborate and facilitate the work of the company distributing, Installing and commissioning.

The country conducted health facilities readiness assessment which informed the final ODP. Installation of CCE is included in the service bundle where distribution and installation is contracted to a local firm[25]. It is a requirement to work hand in hand with the district cold chain technicians building servicing and maintenance capacity.

b) Source of the joint investment

Sources of funding	Amount in US$
Total country joint investment (same amount as cell T34)	1,066,275
Government budget	
Gavi resources[26]	
Current Gavi HSS	
Future Gavi HSS	
Gavi PBF	1,066,275[27]
Total Gavi resources	
Other donor funding (mention the name of donor/s)	
Donor 1:	
Donor 2:	
Donor 3:	
Total other donor/s funding	
Other funding (clarify the source)	
Other 1:	
Other 2:	

[25] Operational Deployment Plan (Annex XIII)

[26] The country is informed that Gavi will disburse directly to UNICEF SD the country's joint investment from HSS and/or PBF grants(s) that are not yet disbursed based on the information provided as a response to question 8b.
The Country has informed in its CCEOP proposal that has been endorsed by the ICC and signed by both Ministers of Health and Finance that its joint investment will come from Gavi HSS.

[27] HSS 1 & II are not fully exhausted and available balances will be considered for possible re-allocation to cover the country co-investment portion subject to necessary ICC and Gavi approvals

		Other 3:	
	Total other sources of funding		

c)Yes. It's a process that the country will need to undertake with the guidance of ICC and Gavi.
d)The Tax Amendment Act of 2016 exempting Aid Funded Projects is attached.

PART D: INITIAL SUPPORT PHASE[28]

This **initial support phase** (through years 1 and 2) is designed to address urgent CCE needs contributing to improvements in coverage and equity, to protect vaccine stocks, complement investments in other supply chain 'fundamentals' and contribute to full scale-up of optimised, sustainable supply chains.

☆	Budgets are **not inclusive** of operational cost. Operational costs must be financed by Ministry of Health or other partners.

CCE	Further information on CCE rehabilitation and expansion plan, equipment selection and strategic deployment plan requirements is provided in Application guidelines Section 5, available at http://www.gavi.org/support/process/apply/cceop/

9. Prioritised (Urgent) CCE needs *(Maximum 3 pages)*	
*Provide information on **2 to 4 prioritised (urgent) CCE needs** as identified in the 'CCE rehabilitation and expansion plan, equipment selection and strategic deployment plan requirements'.* *For each prioritised (urgent) CCE need, please provide the following information:* *1. **The need:** Type of activity (e.g. replace obsolete CCE, extend CCE to unequipped facilities, etc.); specific CCE site (facility); type of equipment required; quantity of equipment items.* *2. **Justification:** Reasons for urgent need (e.g. low CCE and/or immunisation (Penta3) coverage area, gender barriers, mobile population, etc.); current CCE and immunisation (Penta3) coverage in the population area.* *3. **Expected outcome:** Anticipated increase in CCE and immunisation coverage (Penta3); anticipated progress against identified inequity (describe, in alignment with country Performance framework).* *4. **Total CCE budget:** includes Gavi and country joint investment share*	
Prioritised (Urgent) CCE Need #1	
The need	*The country is prioritising the CCE gap according to the grant ceiling communicated in the Upscale Phase Refer to part E*
Justification	Covered in CCEOP 1
Expected outcome	
Total CCE budget	
Prioritised (Urgent) CCE Need #2	

[28] Countries are kindly advised to apply for their full needs regardless of the Gavi CCEOP joint investment ceiling and the funding availability. It is important to inform however how CCEOP will be contributing towards fulfilling the needs identified.

The need	Covered in CCEOP 1
Justification	
Expected outcome	
Total CCE budget	

Prioritised (Urgent) CCE Need #3	
The need	Covered in CCEOP 1
Justification	
Expected outcome	
Total CCE budget	
Prioritised (Urgent) CCE Need #4	
The need	Covered in CCEOP 1
Justification	
Expected outcome	
Total CCE budget	
GRAND TOTAL CCE BUDGET: Initial support (Years 1 and 2)	Covered in CCEOP 1

10. Summary of INITIAL SUPPORT PHASE replacement/rehabilitation, expansion and extension plan

All countries must fill this section to highlight the number of equipment and corresponding number of sites this equipment will serve to meet their replacement/rehabilitation, expansion and extension targets. The values entered below must align with those in Section 9 above and in other parts of the application form.

Replacement/Rehabilitation				**Expansion**		**Extension**	
Existing sites with (non)functional and/or obsolete non-PQS equipment to be replaced with platform-eligible ILR, SDD or long-term passive devices (including equipping sites with a larger equipment)		Existing sites with (non)functional and/or obsolete PQS equipment to be replaced with platform-eligible ILR, SDD or long-term passive devices (including equipping sites with a larger equipment)		Equipping existing sites with ADDITIONAL pieces of equipment for new vaccine introduction and/or to serve an increasing population		Equipping previously unequipped sites (providing immunisation services or not, including existing sites without active devices) and add new service sites	
No of Equipment	*No of sites*	*No of Equipment*	*No of sites*	*No of Equipment*	*No of sites*	*No of Equipment*	*No of sites*

Total	***Total***	***Total***	***Total***	***Total***	***Total***	***Total***	***Total***

11. Ongoing or planned activities around other supply chain fundamentals <u>in the initial support phase</u>	
In this section, linkages must be drawn between requested CCE Optimisation Platform support, on-going Gavi investments (especially through the Health Systems Strengthening support) and other partner supply chain support. *Describe planned or ongoing activities related to other supply chain fundamentals during the initial support phase, including their sources of funding. Responses to this section should be linked to the EVM Improvement Plan.*	
Supply chain managers *Describe all planned or ongoing activities related to improving the availability and performance of supply chain managers, their sources of funding, and partner support.*	Covered in CCEOP 1
Data for supply chain management *Describe all planned or ongoing activities related to data for management, their sources of funding, and partner support. In particular, provide information explaining how improvements to the functionality of logistics management systems will improve the visibility of up-to-date and accurate vaccine stock records at each level of the vaccine supply chain.*	Covered in CCEOP 1
Optimised, efficient design of distribution system *Describe all planned or ongoing activities related to distribution system design optimisation, their sources of funding, and partner support.*	Covered in CCEOP 1
Continuous improvement process *Describe all planned or ongoing activities related to continuous improvement processes, their sources of funding, and partner support.*	Covered in CCEOP 1
Temperature monitoring *Describe the temperature monitoring devices that are currently available in the country? E.g. central level (CTMS), sub-national, lowest distribution and service delivery levels (30 DTRs and RTM devices), and during transportation (freeze tags).* *<u>Furthermore, describe which measures are in place to</u>* *a) obtain temperature data from the various devices;* *b) act following temperature alarms (curative maintenance);* *c) in case of RTM devices, please elaborate on SOPs for each responder in the temperature monitoring system; and* *d) countries wishing to purchase such devices are required to demonstrate how the recurrent costs, such as HR, data transmission, analysis etc., will be covered in this section.*	Covered in CCEOP 1

PART E: SCALE-UP SUPPORT PHASE[29]

This second phase of Gavi CCE Optimisation Platform support (provided from approximately year 3 onwards) is designed to address additional CCE needs as part of optimising design and increasing the sustainability of the supply chain.

☆	Budgets are **not inclusive** of operational cost. Operational costs must be financed by Ministry of Health or other partners.

12. Prioritised (Additional) CCE needs *(Maximum 3 pages)*	
*Provide information on **2 to 4 prioritised (additional) CCE needs** as identified in the 'CCE rehabilitation and expansion plan, equipment selection and strategic deployment plan requirements'.* *For each prioritised (additional) CCE need, please provide the following information:* *1. **The need:** Type of activity (e.g. replace obsolete CCE, extend CCE to unequipped facilities, etc.); specific CCE site (facility); type of equipment required; quantity of equipment items.* *2. **Justification:** Reasons for urgent need (e.g. low CCE and/or immunisation (Penta3) coverage area, gender barriers, mobile population, etc.); current CCE and immunisation (Penta3) coverage in the population area.* *3. **Expected outcome:** Anticipated increase in CCE and immunisation coverage (Penta3); anticipated progress against identified inequity (describe, in alignment with country Performance framework).* *4. **Total CCE budget:** includes Gavi and country joint investment share*	
Prioritised (Additional) CCE Need #1	
The need	1,197 is the gap as per July 2019 inventory based on the current immunisation schedule. However, there is additional need for CCE to increase accessibility and storage.
Justification	In phase 1 of CCEOP, the country received 608 CCE. From the July 2019 inventory,47% (2501)) of all refrigerators do not meet the required standards (1,915 were found to be above 10years and 586 are non PQS and irreparable)[30]. In year two CCEOP, the country will receive 906 CCE units and 310 are expected from the Coverage and Equity grant once approved[31]. In addition, HSS II grant will fund 70 CCE. The balance of 1215CCE is indicative of the need as of July 2019 based on the current immunisation schedule. There is ongoing work to quantify additional CCE to increase on accessibility and increasing storage capacity for MR2, booster doses for TD, Men A introduction, Yellow fever, Hep B and integration of oxytocin into the vaccine cold chain.
Expected outcome	Improvement in CCE functionality, sufficiency and optimality to achieve effective immunisation outcomes(Coverage & equity)
Total CCE budget	5,331,375

[29] Countries are kindly advised to apply for their full needs regardless of the Gavi CCEOP joint investment ceiling and the funding availability. It is important to inform however how CCEOP will be contributing towards fulfilling the needs identified.

[30] CCE Inventory & Facilities segmentation – (Annex X) Pg. 11

[31] Projected Coverage & Equity Improvement Plan – (Annex XII)

GRAND TOTAL CCE BUDGET: "Scale-up support" (Years 3, 4 & 5)	5,331,375

13. Summary of SCALE-UP SUPPORT PHASE replacement/rehabilitation, expansion and extension plan

All countries must fill this section to highlight the number of equipment and corresponding number of sites these equipment will serve to meet their replacement/rehabilitation, expansion and extension targets. The values entered below must align with those in Section 9 above and in other parts of the application form.

Replacement/Rehabilitation				**Expansion**		**Extension**	
Existing sites with (non)functional and/or obsolete non-PQS equipment to be replaced with platform-eligible ILR, SDD or long-term passive devices (including equipping sites with a larger equipment)		Existing sites with (non)functional and/or obsolete PQS equipment to be replaced with platform-eligible ILR, SDD or long-term passive devices (including equipping sites with a larger equipment)		Equipping existing sites with ADDITIONAL pieces of equipment for new vaccine introduction and/or to serve an increasing population		Equipping previously unequipped sites (providing immunisation services or not, including existing sites without active devices) and add new service sites	
No of Equipment	*No of sites*	*No of Equipment*	*No of sites*	*No of Equipment*	*No of sites*	*No of Equipment*	*No of sites*
317	317	586	586	92	23	677	677
317	317	586	586	92	23	677	677
Total	***Total***	***Total***	***Total***	***Total***	***Total***	***Total***	***Total***

14. Ongoing or planned activities around other supply chain fundamentals in the scale-up support phase	
In this section, linkages must be drawn between requested CCE Optimisation Platform support, on-going Gavi investments (especially through the Health Systems Strengthening support) and other partner supply chain support. *Describe planned or ongoing activities related to other supply chain fundamentals during the scale-up support phase, including their sources of funding. Responses to this section should be linked to the EVM Improvement Plan.*	
Supply chain managers *Describe all planned or ongoing activities related to improving the availability and performance of supply chain managers, their sources of funding, and partner support.*	*Availability;* There is continuous recruitment and deployment of cold chain supply managers/technicians at district level to fill existing gaps. *Performance;* The ministry conducted a general training of all District cold chain technicians to update them on new vaccines and new technology as well as improving the skills and knowledge on vaccine and cold chain management. The ministry has established regional cold chain maintenance teams who were trained and have been supported to conduct maintenance, supervision and mentorship on vaccine management. There has also been capacity enhancement for cold chain technicians through one on one hands on training on vaccine handling and management *Source of funding;* The trainings have been conducted with support from implementing partners (GoU, Gavi, UNICEF, PATH, CHAI) *Partner support;* Partners have continuously provided technical support, resource mobilization, supervision and mentorship
Data for supply chain management *Describe all planned or ongoing activities related to data for management, their sources of funding, and partner support. In particular, provide information explaining how improvements to the functionality of logistics management systems will improve the visibility of up-to-date and accurate vaccine stock records at each level of the vaccine supply chain.*	The ministry has incorporated cold chain and stock management tools in to the revised HMIS/DHIS2 with funding support from GoU, UNICEF and Gavi through HSS. There is the EPI dashboard for continuous update on stock availability, vaccine utilization and temperature monitoring. There is also plan to pilot ODK for timely CCE inventory reporting. All these efforts are aimed to improve data management through timely reporting, visibility(dashboards) and integration. Through the CCEOP phase II, the country will receive equipment with inbuilt remote temperature monitoring system (RTMD). Additionally the country is undertaking a vaccine last mile delivery pilot project. This will inform the future enhancement of last mile delivery system of vaccines in the country. Part

	of the pilot involves the use of Logistimo to provide visibility of stock management records at each level of the vaccine supply chain.
Optimised, efficient design of distribution system *Describe all planned or ongoing activities related to distribution system design optimisation, their sources of funding, and partner support.*	As earlier stated the country is undertaking a vaccine last mile delivery pilot project. At the end term of the pilot the assessment results will inform scale up. This will require mobilisation of resources needed.
Continuous improvement process *Describe all planned or ongoing activities related to continuous improvement processes, their sources of funding, and partner support.*	Assessments and Evaluations of the supply chain are ongoing and results will inform future recommendations for continuous improvement.
Temperature monitoring *Describe how the temperature monitoring system will evolve? Which devices will be used?* *Furthermore, describe which measures are in place to* *a) obtain temperature data from the various devices;* *b) act following temperature alarms (curative maintenance);* *c) in case of RTM devices, please elaborate on SOPs for each responder in the temperature monitoring system; and* *d) countries wishing to purchase such devices are required to demonstrate how the recurrent costs, such as HR, data transmission, analysis etc., will be covered in this section.*	Currently the country is using 30-day temperature monitoring devices in all static health facilities (fridge tag 2E). In phase two of CCEOP 1 the country is expecting to introduce remote/central temperature monitoring system (RTMD) with the equipment to be supplied by Haier.

PART F: BUDGET TEMPLATES

This section details the number of requested equipment items and equivalent budget. A maximum investment amount (and indicative number of equipment items) corresponding to the phased support request will be considered for recommendation of approval by the IRC and subsequent decision by Gavi.

However, in consultation with the Secretariat and in-country partners, the number of equipment items may be modified when the detailed operational plan is developed subsequent to the Platform proposal and the support may vary within the limit of the approved maximum amount.

Budgets must be completed in the attached budget template, and with reference to the ***CCE Optimisation Platform Guidelines, Gavi CCE Optimisation Platform Technology Guide and CCE planning prices and Total Cost of Ownership (TCO) analysis tool.***

15. CCE Optimisation Platform - Budget Template

*To be filled by **ALL** countries after selection of equipment that best suit their CCE needs (e.g. specific model and make).*

Countries will plan with indicative PQS prices and corresponding service bundle estimates (depending on equipment being on/off-grid and estimated costs of service bundle).

Planning price ranges are provided in this template.

How to fill the attached budget template: Countries should:

- *Select appropriate 'Equipment Model' against the listed equipment types*
- *Fill out the 'Estimated service bundle cost' and 'Number of equipment' requested*
- *(In the last 'Total CCE OP Request' table), fill out second and third preference for each model selected. The second and third preference should be comparable products in the same capacity segment.* **Countries are informed that Gavi, and its Alliance partners principally UNICEF, will try as much as possible to respond to countries' first preference, but manufacturers' lead time could also lead to countries receiving cost estimates for either their second or third preference.**

Completed budget template should be sent as an attachment along with application form.

Budgeting for Buffer and Procurement fees

- *Buffer fees: A 7% buffer on **total equipment cost** is built into country yearly budgets. This will cover currency variations, demurrage and associated costs and will be returned to country, if unused.*
- *Procurement fees: Countries will also need to **pay UNICEF's procurement costs for the country joint investment portion**, estimated to be up to 8.5%. Please obtain actual amounts from the UNICEF country office..*

PART G: PERFORMANCE FRAMEWORK

Countries must include **CCE Optimisation Platform indicators** in the application. The indicators need to be included in the Performance Framework for the current and/or proposed Gavi HSS support, after Platform proposal approval.

According to their specific context, countries are required to consider the most appropriate data sources to report on programme implementation and progress against the targets set. This should be discussed with partners (which may provide technical assistance) and the Gavi Secretariat.

Programmatic reporting updates, as well as targets and indicator updates, will be made as part of the Gavi performance framework and annual Joint Appraisal process. Countries are expected to consider relevant smart indicators to be monitored and reported against, in terms of intermediate results or outcomes/impact.

16. Indicator monitoring and reporting requirements
*As a **minimum**, countries need to monitor and report on:* • ***5 MANDATORY intermediate results indicators;*** • ***1 MANDATORY intermediate result indicators <u>if countries are procuring User independent freeze protected cold boxes and vaccine carriers;</u> and*** • ***1 to 3 ADDITIONAL intermediate results indicator(s).***
1) ***CCE Replacement/Rehabilitation in existing equipped sites**: Percentage of existing sites with (non)functional and/or obsolete non-PQS and PQS equipment to be replaced with platform-eligible ILR, SDD or long-term passive devices (including equipping sites with a larger equipment)* *2)* ***CCE Expansion in existing sites:** Percentage of existing sites being equipped with ADDITIONAL pieces of equipment for new vaccine introduction and/or to serve an increasing population;* ***3. CCE Extension in unequipped existing and in new sites:** Percentage of previously unequipped sites (providing immunisation services or not, including existing sites without active devices) and new service sites being equipped with Platform eligible equipment.* ***4. CCE maintenance :** Well-defined indicator proposed by country to reflect appropriate maintenance of equipment; for example percentage of equipped facilities with functioning cold chain,[32] such as demonstrated by remote temperature monitoring; **and***

[32] **Indicator definition**: *% CCE functioning = (# functioning CCE devices) / (total # of CCE devices designated for use)*. CCE devices considered for this indicator include all refrigerators, fixed passive storage devices, walk-in cold rooms and freezers designated for string vaccines. Both the numerator and denominator should be collected from the

3) ***5. Freeze-free to non-freeze-free carrier ratio:*** *Ratio of freeze-free cold boxes/carriers to non-freeze-free cold boxes/carriers in-country?*

USE THE TABLE BELOW TO COMPLETE MANDATORY INDICATORS (please note that indicators should be cumulative, where appropriate)

Indicator *(Provide name of the mandatory indicator as shown above)*	***Definition*** *(Provide definition if not already specified)*	***Data Source*** *(identify data source)*	***Reporting frequency*** *(annual, semi-annual, quarterly etc.)*	***Baseline (Year)*** *(Provide numerator and denominator for calculating percentage)*	***Target Year 1*** *(Provide numerator and denominator for calculating percentage)*	***Target Year 2*** *(Provide numerator and denominator for calculating percentage)*	***Target Year 3 (If applicable)*** *(Provide numerator and denominator for calculating percentage)*
1. ***CCE Replacement/rehabilitation in existing Equipped sites***	*Percentage of existing sites with (non)functional and/or obsolete non-PQS and PQS equipment to be replaced with platform-eligible ILR, SDD or long-term passive devices (including equipping sites with a larger equipment)*			*Numerator =* *Denominator=* *Percentage=*	*Numerator =* *Denominator=* *Percentage=*	*Numerator =* *Denominator=* *Percentage=*	*Numerator =* *Denominator=* *Percentage=*
2. ***CCE expansion in existing equipped sites:***	*Percentage of existing sites being equipped with ADDITIONAL pieces of equipment for new vaccine introduction and/or to serve an increasing population;*			*Numerator =* *Denominator=* *Percentage=*	*Numerator =* *Denominator=* *Percentage=*	*Numerator =* *Denominator=* *Percentage=*	*Numerator =* *Denominator=* *Percentage=*

same geographical area / period in time and should not include decommissioned equipment. Functionality of CCE is broadly defined to mean that the device is operable at a particular point in time for storing vaccine.

Indicator *(Provide name of the mandatory indicator as shown above)*	***Definition*** *(Provide definition if not already specified)*	***Data Source*** *(identify data source)*	***Reporting frequency*** *(annual, semi-annual, quarterly etc.)*	***Baseline (Year)*** *(Provide numerator and denominator for calculating percentage)*	***Target Year 1*** *(Provide numerator and denominator for calculating percentage)*	***Target Year 2*** *(Provide numerator and denominator for calculating percentage)*	***Target Year 3 (If applicable)*** *(Provide numerator and denominator for calculating percentage)*
3. CCE extension in unequipped existing and/or new sites:	*Percentage of previously unequipped sites (providing immunisation services or not, including existing sites without active devices) and new service sites being equipped with Platform eligible equipment.*			*Numerator =* *Denominator=* *Percentage=*	*Numerator =* *Denominator=* *Percentage=*	*Numerator =* *Denominator=* *Percentage=*	*Numerator =* *Denominator=* *Percentage=*
4. ***CCE maintenance***							
5. ***Freeze-free to non-freeze-free carrier ratio***	*Ratio of freeze-free cold boxes/carriers to non-freeze-free cold boxes/carriers in-country*						

ADDITIONAL intermediate results indicator(s): *Countries are required to suggest 1 to 3 intermediate results indicators to track performance of rehabilitation, expansion, maintenance and/or other supply chain fundamentals (include baseline, data source, targets and frequency of reporting).*

Examples *of additional intermediate results indicators options are:*

1. ***Functional status of cold chain equipment****: Ratio of functional CCE and ratio of districts with at least 90% functional equipment;*
2. ***Closed vial wastage****: Rate at a national, district and facility level;*
3. ***Forecasted demand ratio****: Ratio of actual usage compared to forecast (vaccines);*
4. ***Full stock availability:*** *Ratio of facilities/districts without any stock out;*
    a. *Stocked according to plan: Percentage of facilities/stores/districts that have stocks levels between set minimum and maximum stock levels;*

5. ***Temperature alarms:*** *Frequency and magnitude of heat and cold alarms per monitoring period (i.e., temperature excursion) and number of CCE devices with more than a certain level of temperature excursion;*
6. *Rate of health facilities dashboard use, timely analysis and use for decision making;*
7. ***On-time and in-full (OTIF) delivery****: Ratio of order completely delivered on time;* ***or***
8. *Number of health managers trained and despatched for supply chain oversight function and rate of reported monitoring activities.*

USE THE TABLE BELOW TO COMPLETE ADDITIONAL INDICATORS

Indicator *(Provide name of the* ***additional*** *indicators as shown above)*	***Definition*** *(Provide definition if not already specified)*	***Data Source*** *(identify data source)*	***Reporting frequency*** *(annual, semi-annual, quarterly etc.)*	***Baseline (Year)*** *(Provide numerator and denominator for calculating percentage)*	***Target Year 1*** *(Provide numerator and denominator for calculating percentage)*	***Target Year 2*** *(Provide numerator and denominator for calculating percentage)*	***Target Year 3 (If applicable)*** *(Provide numerator and denominator for calculating percentage)*
1.							
2.							
3.							
Add more indicators HERE if needed.							

CCE platform indicator	**Data Source**	**Baseline**		**Targets**					**Frequency**
		Value	Year	2017	2018	2019	2020	2021	
Number of equipped facilities[33] replacing cold chain equipment with higher performing equipment	Cold chain inventory update.	269	2016	0	635	1516	91	308	Annually

[33] This indicator and the next considers the deployment of CCE

Number of previously unequipped facilities equipped with optimal cold chain equipment	Cold chain inventory update.	1042[34]	2016	0	162	105	0	100	Annually
Percent of functionality of cold chain equipment	Cold chain inventory update.	75%	2014	80%	80%	85%	90%	90%	Annually
Submission of an updated CCE inventory		1	2016	1	1	1	1	1	Annually
Percent of cold storage sites with sufficient capacity	Cold chain inventory update.	54%	2016	54%	66%	93%	95%	100%	Annually
Percent of fridges with alarms	Cold chain inventory update.	NA	2016	10%	10%	5%	5%	5%	Annually
Percent procurement compliance of cold chain equipment	Procurement plan	NA	2016	100%	100%	100%	100%	100%	Annually

[34] Considers the public and NGO facilities currently unequipped with CCE

PART H: PROJECT MANAGEMENT

The effective and successful implementation of the CCEOP relies heavily on the in-country project management team (PMT) which needs someone to manage the PMT. This project manager, designated by the MoH, will have to:

- Establish the Project Management Team (refer to UNICEF's Project Management Support Package for ToRs)
- Coordinate the planning, rollout and monitoring of the CCE OP
- Mobilise the required resources for the project
- Provide status updates to the NLWG
- Coordinate with all stakeholders including the vendor and UNICEF
- Report on deviations
- Managing risks

17. Project Management
The country is asked to please provide the following information: *a) Name and contact details of the dedicated project manager designated by the MoH* *b) Describe how the project manager will be empowered and supported to ensure the smooth implementation of CCE OP*
a) Project Manager details are presented below: i. First and last Name: Dr. Driwale Alfred ii. Title: (Asst. Commissioner) Programme Manager iii. Department/Direction: UNEPI iv. E-mail: driwalealfred2019@gmail.com. v. Cell phone: + 256 772 515222 b) The project Manager will be working with a Project Management Team comprising of representative from partners, PATH, CHAI, WHO and UNICEF to effectively oversee the project implementation.