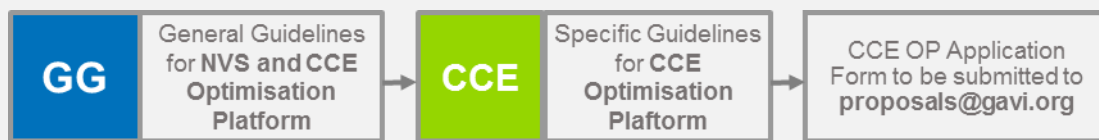


Application Form for Cold Chain Equipment Optimisation Platform Support in May 2017

Document Dated: April 2017

Application documents for 2017:

Countries applying for Gavi Cold Chain Equipment (CCE) Optimisation Platform support in 2017 are advised to refer to the following documents in the order presented below:



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 first read the General Guidelines for all types of support, followed by the CCE Optimisation Platform guidelines. Thereafter, applicants should complete this CCE Application Form and submit by email to proposals@gavi.org.



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

Web links and contact information:

All application documents are available on the Gavi Apply for Support webpage: www.gavi.org/support/apply. 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.

CONTENTS

Part A: Applicant information	1
Part B: Mandatory attachments: National strategies and plans	2
<i>The CCEOP will benefit a total population of 5.7 million in 25 priority districts, 45% of the total population in Somalia for the initial phase, however, the rest of the entire population will benefit in the follow up phase. The zone specific coverage is projected at Puntland 1.5 million (74% of total population), Somaliland 1.9 million (60% of total population) and South Central 2.1 million (30% of total population) people. The beneficiary population includes 0.22 million new-borns (0.20 million surviving infants) and 0.29 million women of child bearing age. Precise estimates are not available. However, nomadic populations live in 24 out of these 25 priority districts. In 18 priority districts, IDPs are living in IDP camps near cities or big towns (Puntland-6, Somaliland-2 and South Central-10).</i>	
<i>Equipment allocation and selection</i>	6
Part C: Situation analysis and requested support	10
Part D: Initial support phase	18
Part E: Scale-up support phase	26
Part G: Performance framework	30


PART A: APPLICANT INFORMATION

1. Applicant information	
Country	Somalia
Date	2 May 2017
Contact name	Osman Abdi Omar
Email address	osman.a2004@yahoo.com
Phone number	+252 615353783
Total funding requested from CCE Optimisation Platform (US \$)	<p><i>This should correspond exactly to the budget requested in the embedded template.</i></p> <p><i>Total budget US \$3,337,287</i></p> <p>Gavi co-financing US \$2,669,830</p> <p>Country joint investment US \$ 667,457</p>
Does your country have an approved Gavi HSS support on-going?	Yes <input checked="" type="checkbox"/>
	No <input type="checkbox"/>
Indicate the anticipated final year of the HSS: 2022	
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: April 2018
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: September 2022
Signatures Include signed (and official) CCE Optimisation Platform application endorsement by: a) Minister of Health and Minister of Finance (or delegated authorities) b) Members of the Coordination Forum (HSCC/ICC or equivalent body)	<p><i>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:</i></p> <p>Minister of Health (or delegated authority) Minister of Finance (or delegated authority)</p> <p>Name: _____ Name: _____</p> <p>Signed scanned copy attached (#1.b CCEOP endorsement signatures)</p> <p>Signature: _____ Signature: _____</p>

	Date:	Date:
--	-------	-------

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.

	<p>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.</p>
---	---

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	2/05/2017		
2	Minutes of the Coordination Forum meeting (ICC, HSCC or equivalent) endorsing the proposal ¹	Yes	Combination	Last 14 months	
3	National Health Sector Development Plan	Yes - HSSP	30/01/2013	2013-2016	
4	cMYP	Yes	17/01/2016	2016-2020	
5	EVM Assessment	Yes	April 2017	Dec 2016-Feb 2017	
6	EVM Improvement Plan	Yes	April 2017	2017-2020	
7	EVM Annual Work plan and Progress Report on EVM Improvement Plan ²	Yes	Dec 2016		
8	WHO CCEI Tool/UNICEF IMT/PATH CCEM Tool/CHAI tool ^{3,4}	Yes	Jan 2016		
9	Inventory Report and Facilities segmentation	Yes	April 2017		
10	Single document: Chapter 1: Cold Chain Rehabilitation and Expansion Plan Chapter 2: Projected Coverage and Equity Improvements Chapter 3: Strategic Deployment Plan Chapter 4: Equipment Selection	Yes	March 2017		
11	Maintenance Plan with financing and source(s)	Yes	March 2017	2018-2021	

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
12	Proof of status for CCE tariff exemptions waiver	Yes	April 2017		
13	Terms of Reference for the relevant Coordination Forum (such as ICC) including all sections outlined in Section 5.2 of the General Application Guidelines				Process is on for drafting HSCC TORs
14	Minutes of the Coordination Forum meetings from the past 12 months before the proposal	Yes			
15	Other relevant documents				
16	- HSS2 Application	Yes	8 Oct 2016	2017-2022	
17	- HSS2 Objectives, strategies, activities and budget narrative	Yes	8 Oct 2016	2017-2022	
18	- Strategic review of the Somali health sector - challenges and prioritized actions 2015, WHO	Yes	11-17 September 2015		
19	- Partners_ Engagement Framework and Alliance Accountability Framework, Board Meeting, 22-23 June 2016, Geneva	Yes	22-23 June 2016		
20	- Update on HMIS progress in Somalia	yes	Dec 2016		
	Confirmation of DHIS2 implementation and progress	Yes	Dec 2016		

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.

Country back ground

This CCEOP Application seeks the support of GAVI for the very fragile and fragmented Federal Republic of Somalia. The 5th poorest country in the world. Somalia is one of the most fragile states in the world, with one of the most complex and protracted conflicts (#19, page 5). Especially in the South Central Zone many of the people experience some of the lowest health indicators in the world. (#3 page 17). Given all the vulnerabilities of the population of Somalia (approximately 65% are pastoralists with very unique needs) the HSSP (established in 2013) describes the basis for its Gender Equality and Social Inclusion (GESI) approach to health planning in this chronic/post-conflict scenario. (#3 page 19-21). Although all strategic management functions of the Directorate of Health are scored at Less than Adequate or Minimal, the HSSP commits the country to (amongst others) the development and support of immunization (as part of the Essential Package of Health Services), Health Management Information Systems and service agreements with NGOs. (#3 page 36-46)

For the purposes of this CCEOP Application, it is important to understand the current position of Somalia in terms of socio-economic development and maturity of infrastructure and human

resource support. It is also important to understand the effects of the internal conflict on the management of the country's vaccine cold chain. The CCEOP requires an intense engagement of equipment and logistics and it is critical for this application to be interpreted in terms of these challenges and the impact of a new and juvenile health system on the implementation of the CCEOP together with its expectations of performance. What may be possible in one year in a stable country may take much longer in Somalia. However, the solid basis of commitment described in the HSSP will make it most likely to be successful in the institutionalization of these CCEOP fundamentals. This HSSP is in the process of being replaced by a new HSSP for the period 2017-20 including Zone specific HSSPs. The cMYP 2016-2021 has been completed and has also been replicated in Zone specific cMYPs. These cMYPs will inform the new HSSPs and entrench the EPI services further. (#4 page 8)

"The key challenges facing the Somali health system are: (i) persistently high burden of disease; (ii) limited institutional capacity and stewardship role of ministries of health; (iii) inadequate, unpredictable and unsustainable level of financing, with a high share of out-of-pocket spending on health; (iv) absence of balanced, motivated, well-distributed and well-managed health workforce with the appropriate skills mix; (v) limited and unequal access to essential health services, and poor quality and safety of services across all levels of care; (vi) inadequate procurement/supply system and irrational use of essential technologies and medicines; (vii) absence of national surveys and census, weak births and deaths registration, limited operational research and disease surveillance; (viii) lack of synergy of humanitarian response to health; and (ix) inadequate action on social determinants of health. (#19, page 5). These factors in itself provide for a unique opportunity to have a significant impact on matters such as, coverage and equity, reaching marginalized communities, improvement of the cold chain logistics in the country, upliftment /enablement of the human resources in health and introducing the latest technologies in cold chain equipment. However, this will require the consistent, sustained and major support from the donor partners.

It is in this context that the rehabilitation and expansion management of cold chain equipment will take place and will influence almost all logistical components such as;

- Obtaining a high level of accuracy of the cold chain equipment inventory including facility segmentation (due to security matters for accessing sites)
- Procurement and deployment of equipment with special provision for site access control and protracted storage of equipment pending site access clearance
- Maintenance of equipment especially where access is restricted
- Collecting and analysing data for the management of cold chain equipment

Against this background, it is understandable that Somalia has some of the lowest coverage figures in the world. Additional contributing factors are firstly, accurate population numbers are not available and latest estimates have to be used. Secondly, with an estimated population (2014) of 12.3m, 22.8% are rural, 25.9% are nomadic and another 9% are IDP (#4 page13). The human resources for health ratio in Somalia is estimated at 0.4/1000 population. Until this ratio improved closer to the WHO minimum level of 2.3/1000 (#4 page 17) it can reasonably be expected that the donor partners, especially UNICEF and WHO as well as the NGOs will have to provide extensive support at all levels, not only in human resources but also in equipment, services and management (#4 page 21)b.

The cMYP lays the foundation for a coordinated and context specific logical approach to extending immunization services further to reach a greater number of the population and thereby increasing coverage and equity. This will be accomplished through the implementation of three major objectives, i.e. zonal coordination, integrated micro-plans and targeting selected priority districts. (#4 page 22) This will include establishment of new routine immunization services in regional and district hospitals and introducing new outreach services and mobile immunization teams to increase coverage and equity in Somalia. In September 2016 Somalia submitted an HSS2 Grant Application which has been recommended for approval by the IRC. In this HSS2 application, the target 25 districts and immunization services were identified and the cold chain equipment and logistics required to support such a focussed approach were clearly aligned with the HSS2. (#16 page 22 Objective 2)

The 2013 EVM Assessment identified strengths and weaknesses in the vaccine management in Somalia and an Improvement Plan was identified. The December 2016 progress report on these IP items clearly demonstrates that despite the adverse conditions prevailing since then, significant progress has been made in various areas such as SOPs, temperature monitoring devices, training of health workers and the training of cold chain officers (#7). This would not have been possible without the sustained and intense support from UNICEF and WHO to maintain a functional immunization service and logistical support thereof while developing the three MoH to support themselves in the future. UNICEF has systematically supported the three Ministries of Health in all aspects of the EPI. A number of core items for strengthening the cold chain management in Somalia have received special attention and will be further strengthened by this CCEOP application, such as;

- A cold chain equipment inventory has been established as far as possible taking into consideration the non-access to some conflict-zone sites
- This CCEOP application aims to upgrade the CCE in Somalia to the latest technology equipment
- Special attention is given to converting as many as possible sites to solar technology CCE
- Special attention is given to the standardization of CCE to reduce not only the number but also the models of CCE in order to reduce the burden and cost of maintenance in a country where CCE maintenance is difficult to execute universally

A new EVMA 2017 has shown changes from 2013 and has created a solid base from which to implement further changes and improvement in synchronization with the HSS2 and CCEOP. The major findings are in (#5 Page 12&40)

Data management is currently done with manual paper based and Excel Spreadsheets data collection. Somalia has taken the decision to implement the DHIS2 system and core installation and training is at an advanced stage. (#20 page 1) It is expected that the first roll-out will commence during Q3 2017. It is also the intention that CCE data will be integrated in the DHIS2 system during the scale-up phase of this CCEOP. It is not clear at this stage how this data will be shared and integrated across three MoH.

The procurement and deployment of the CCE will follow the annual requirements according to the budget projections. This will be done with the cooperation between UNICEF Country Office and the MoH for the three zones. It is expected that a portion of this CCE will have to be warehoused in a special "holding storage" until security clearance is given for deployment and installation.

This additional cost of deployment is not part of the budget template. A special request is made to GAVI CCEOP/UNICEF-SD to negotiate this special holding storage with the manufacturers as part of the service bundle including maintenance of warranties and installation/training implications.

Decommissioning policies and procedures are not yet clearly described by the three MoH. UNICEF Country Office will engage with the relevant authorities to establish such policies and procedures in the next four years (#10 page 23). UNICEF plans to hold a workshop in Q4 2017 that will enable us come up with a logistics working group which in event will be tasked to draw up procedures in regards to decommissioning obsolete CCE

Capacity building in context of Somalia

Capacity building in cold chain and vaccine management will be strengthened through the HSS2 Grant Objective 4: Strengthen immunization program leadership and management. This will mainly involve vaccine management training for health workers at all levels and basic CCE technical training for cold chain officers (#7) (#11a page 10)

Priorities for initial support phase

a) Prioritised (Urgent) CCE Need #1 (2018)

- 25 priority districts focused interventions: a) Newly to be equipped-all new facility to be established as per the HSS2 guide addressing low coverage and equity ; b) Cold Chain Capacity gap for existing facilities, c) all absorption Equipment to be replaced most of them

are age of 8 and more, d) , all obsoleted CCE with age of 10 years and more; e) CCE non optimal and age of 8 to 10 years

- Introduction of Long term passive devices for selected 11 sites where outreaches are challenged by longer duration to reach community with limited access to services
- Remote temperature monitoring devices RTMDs: Introduction of RTMD at the three zonal vaccine stores and the use of RTMD for performance evaluation CCE

b) Prioritised (Urgent) CCE Need #2 (2019)

- All other district focused interventions: a) New facility to equip CCE; b) Cold Chain Capacity gap for existing facilities, c) all absorption Equipment to be replaced most of them are age of 8 and more, d) , all obsoleted CCE with age of 10 years and more; e) CCE non optimal and age of 8 to 10 years.

Priorities for scale-up support phase(2020-2022)

- Spare parts and Temperature monitoring device_30DTR: (a) gradual replacement of all 30 TDR as it shelf-life ends (estimated to end 2 to 3 years) and (b) annual spare parts requirement as per manufacture guide and field requirement

Population Coverage:

The CCEOP will benefit a total population of 5.7 million in 25 priority districts, 45% of the total population in Somalia for the initial phase, however, the rest of the entire population will benefit in the follow up phase. The zone specific coverage is projected at Puntland 1.5 million (74% of total population), Somaliland 1.9 million (60% of total population) and South Central 2.1 million (30% of total population) people. The beneficiary population includes 0.22 million new-borns (0.20 million surviving infants) and 0.29 million women of child bearing age. Precise estimates are not available. However, nomadic populations live in 24 out of these 25 priority districts. In 18 priority districts, IDPs are living in IDP camps near cities or big towns (Puntland-6, Somaliland-2 and South Central-10).

The network of immunization services will be expanded to increase the availability of immunization services. Complete range of immunization services (all antigens) will be established and supported in 9 regional hospitals, 17 district hospitals and 36 MCH centers by the provision of cold chain equipment in the initial support phase. 75 other MCHs in the 25 priority districts will be provided with CCE in order to carry outreach services as per HSS II proposal in order to scale up immunization coverage

Equipment allocation and selection

The equipment model preferences for each store type chosen by UNICEF and MoH for this forecast with support of the total cost of ownership tool. The allocation of new equipment was according to these preferences, population size, selecting appropriate energy sources, addition of new vaccine in programme.

It was future agreed that all health facilities with a population $\geq 50,000$ be allocated a solar direct drive (SDD) refrigerator (both fridge and freezer), a population $> 50,000$ be allocated a SDD refrigerator and all district vaccine stores are allocated SDDs with both fridge and freezer compartment (#9 page 24). The selection again looked into previous past performance of the equipment selected to ascertain its maintenance records and useful life. Equipment that was relatively cheap but previously had poor maintenance records was dropped and next level of equipment was selected.

Funding of the EPI activities and specifically Cold Chain Logistics

Funding of the CCE is applied for in this CCEOP Application (Total amount: **US\$ 2,669,860** plus 20% contribution from the HSS2 Grant **US\$667,455**).

GAVI is also requested to make provision in the service bundle with manufacturers for abnormal warehousing of cold chain equipment due to deployment restrictions (security access) to the value of US\$98 000 over two years (2018-2019)

Contribution to expected coverage and equity

The expected increases in coverage and equity are described in the cMYP (#4 page 44). The Immunization Program aims to monitor 13 coverage indicators. (#10 Chapter 2). The CCEOP aims to monitor 4 indicators to determine the contribution of CCE to the overall targets due to the fact that these coverage contributions have never been monitored before and the first 4 years of the CCEOP will be used to establish and validate the contribution of CCE to coverage and equity. The four indicators to be used are;

1. Increase in Penta3 coverage
2. Increase in the % of children fully immunized
3. Improvement in geographical equity - % of districts that have at or above 80% Penta3 coverage
4. Improvement in socio-economic equity – Penta3 coverage in the lowest wealth quintile is less than % points of the coverage in the highest wealth quintile

Performance Framework

Mandatory Intermediate Indicators to be Monitored

1. Initial Phase:

Number of Regional Hospitals equipped:

Number of District Hospitals equipped:

Number of District Stores equipped

Number of outreach points equipped:

Number of Mobiles equipped

2. Scale-up phase:

Number of absorption CCE replaced:

Number of old CCE replaced:

3. Percentage of facilities with functioning cold chain
4. % Freeze-free cold boxes (of total cold boxes in-country)

Additional intermediate indicators to be monitored:

1. Number of facilities converted from kerosene/gas to solar energy source
2. Number of facilities converted from electricity to solar energy source
3. Ratio of districts with at least 90% functional equipment
4. Number of health workers trained in cold chain management
5. Number of cold chain officers trained in maintenance of CCE

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 (NLWG)? 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)

1. The Coordination Forum Chair is a senior leader from the Ministry of Health (MoH) with decision making authority (e.g., Minister or Permanent Secretary)

2. Members include senior-level representatives with decision-making authority from each of the following categories:

- EPI programme (e.g., EPI manager and direct leadership of EPI manager)
- Ministries related to budget, financial plans and other topics related to EPI financing (e.g. Ministry of Finance)
- MoH planning departments/ divisions and other directorates related to HSS
- Ministries (other than MoH) with high relevance to EPI programme implementation (e.g. Ministries of Social Services, Education, Devolution)
- Civil society most active in immunisation and representing the voice of constituencies (e.g. advocacy groups, parent associations, religious groups)
- Key donors most active in immunisation, maternal/neonatal/ child health, and/or health system strengthening in the country (e.g., a few bilateral donors or representatives of a functioning donor coordination body)
- Key (implementing) partners most active in immunisation and health system strengthening in the country, i.e. as part of Gavi Alliance representatives from WHO and UNICEF with technical fluency in EPI and HSS and representatives of other implementers

Mandate

3. Review and approve applications for Gavi support (including HSIS₂₀), Gavi grant renewals²¹ and Partners' Engagement Framework (PEF) submissions for 2018 in a broad and participatory process, ensuring their alignment with national strategic and operational plans and a focus on sustainable coverage and equity.

4. Ensure a broad and participatory process in application development also on the operational and technical level, involving the relevant institutions described above.

5. Review and endorse operational plans and budgets for HSIS support

6. Oversee progress of Gavi investments based on discussion and approval of Joint Appraisal and, if possible, based on insights from the EPI team and operational/ technical Coordination Forums.

Governance

Context: The required governance best practices below can typically improve the joint understanding of the Coordination Forum's role, the inclusiveness of decision making and can ensure a constant flow of information between all Coordination Forum members.

Terms of Reference (TOR)

7. The role of the Coordination Forum defined through a formal TOR, signed and shared with all members, including objective and mandates of the Coordination Forum; membership composition, selection process, and membership rules; meeting rules (frequency and timing of meetings); decision-making procedures (including quorum, presence of chair, voting rules for approving different types of decisions); support functions (including who is responsible); roles and organisational structure of the Coordination Forum secretariat (or equivalent); and terms of reference for committees and/or working groups (if applicable)

Decision-making procedures

8. The Coordination Forum follows the quorum (presence of at least a certain share of members during Coordination Forum meetings to make any decisions) as defined in the TOR.

Support functions

9. The Coordination Forum takes minutes for each meeting and share with all members within a defined time period after a meeting, including a list of members attending the meeting and whether quorum was met.]

There is tentative plan to initiate the establishment of the NLWG through “NLWG establishment workshop” to take place in Q1 2018. The workshop intended to bring all zones and supporting partners to develop ToR and adopt to meeting the local context. This will be followed by formal endorsement of the MoH to clearly define how the NLWG will be operated within the Ministry of Health (MOH) as well as its decision-making structures, which decision makers will consult on to make supply chains a national priority.

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:

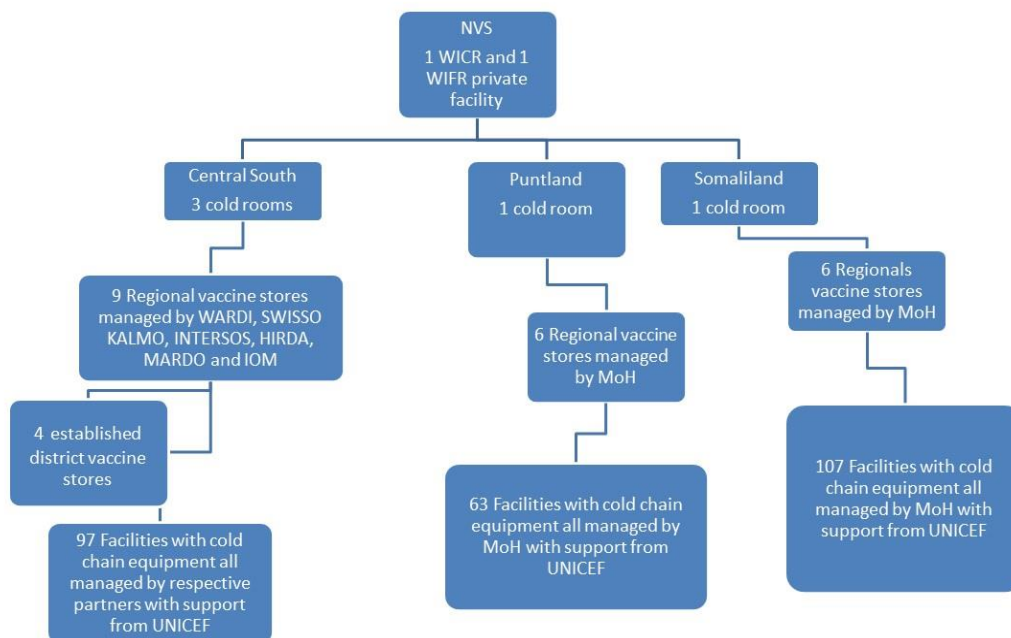
- a) How is the country's immunisation supply chain administered?
- b) What weaknesses have been identified in the country's supply chain?
- c) Through what interventions are these weaknesses currently being addressed?
- d) Describe challenges that are hindering the implementation of these interventions.
- 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?
- 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?

a) How is the country's immunisation supply chain administered?

It is important to understand the Somalia context for attaining the objectives. The socio-political & security situation in each of the zones is very different. There are at least 3 governance zones in Somalia with different governance capacities. The North-west zone (Somaliland), the North-East zone (Puntland) and Central South Somalia which are developing capacity to manage aspects of cold-chain & vaccine management supported by UNICEF. Accordingly, there are zonal cold chain stores in Hargeisa in Somaliland, Garowe in Puntland and Central South Somalia (Mogadishu and Baidoa) in addition to regional stores managed by the governments and supported by funds from UNICEF. Central South Somalia is largely dependent on UNICEF and NGO partners for Cold-chain & Vaccine management in addition to service delivery in the health facilities funded by various programs like EPHS and JHNP. The NVS was sub contracted to K&N a private entity which is responsible for day to day supply chain management and UNICEF's roll is over sees and give technical guidance. All vaccine are delivered to the three zonal stores by air, then by land to all regional vaccine stores in Somaliland and Puntland while in South Central Somalia, all regional stores are supplied by air both charter and commercial flights.

The health service delivery structure is organized on the basis of EPHS developed in 2009 comprising of four levels of service provision and ten health programs. The four levels are primary health Unit (health posts and PHC centers), Health Centers (MCH Centers), District hospitals and Regional Hospitals. Health posts are primary used during SIAs and emergency responses. (#4 page 18)

Flow chart showing the different levels of the supply chain in Somalia as per 2016 cold chain inventory



b) What weaknesses have been identified in the country's supply chain?

- Existing management structure at the zonal, regional and district levels is insufficient
- Use of out-dated CCE
- Lack of clarity in roles and responsibility for the different stakeholders in supply chain
- Weak planning and monitoring processes
- Refer to #10 page 5

c) Through what interventions are these weaknesses currently being addressed?

- Government focus on developing long term health policies and strategies
- GAVI support for health system strengthening
- Capacity building programmes
- Engagement of private sectors in immunization services

d) Describe challenges that are hindering the implementation of these interventions

- Government commitments
- Lack of adequate funding
- Government bureaucracy in dealing with NGO's

e) Describe lessons learnt from recent supply chain related support that inform the current request for CCE Optimisation Platform support.

- Immunization of nomadic has been a challenge due to lack of specific CCE
- Low coverage partly laying on un even distribution of CCE
- High cold chain running cost due to use of out date equipment
- Somalia has lost HFs (burnt down) due to fuel related issues from CCE

f) What percentage of facilities have reliable access to grid electricity for up to or more than 8 hours per day?

- *Somalia does not have reliable grip power, most of the facilities with electrical equipment are powered by generators*

g) Please give the quantity and percent of current CCE that is:

a) functional;

As per CCE inventory 82.7% of the equipment was working well, 6.3% was working but needed service while 10.9% of the equipment was faulty.

b) PQS-approved;

84% is PQS approved

c) non-PQS-approved; and/or

16% is non-PQS-approved

d) Obsolete?

15% of the non PQS is out dated equipment, however a small percentage that was not stipulated in the 10.9% faulty equipment is also obsolete.

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

- *84% of the birth cohort*

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

- *Replacement of out dated (absorption) equipment*
- *Filling capacity gaps*
- *Eliminating costly electric refrigerators*
- *Installation of these equipment as we lack HR capacity skills*

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

- *Provision of adequate spares for the existing CCEOP compliant refrigerators*
- *With more new advanced CCE in the field, this will cut down vaccine stock outs*

k) What are the overall CCE needs?

- *To equip regional and district hospitals in order for them carry out full immunization*
- *Capacity expansion and up grade*
- *Establishing a new level in the supply chain (district vaccine stores)*
- *Replacement of obsolete equipment*

Table of overall requirement and by zone and CCE type (Initial phase)

	Year	Priority level	Equipment Model	NWZ	SCZ	NEZ	Total Qty
				# of equipment	# of equipment	# of equipment	
Initial Phase: Prioritised (Urgent) CCE Need	2018	New facilities	TCW 40SDD	1	32	24	57
			TCW 2043SDD	4	11	4	19
			VLS154 Green Line SDD	5	10	4	19
			VLS 400A Green Line	0	0	0	0
			Arktek-YBC-5	3	3	5	11
			Fridge-tag 2	13	56	37	106
		Capacity gaps	TCW 40SDD	0	1	0	1
			TCW 2043SDD	0	0	3	3
			VLS154 Green Line SDD	0	0	0	0
			VLS 400A Green Line	9	16	16	41
			Fridge-tag 2	9	17	19	45
			TCW 40SDD	4	6	0	10
		Absorption Equipment to be replaced	TCW 2043SDD	6	0	0	6
			VLS154 Green Line SDD	0	0	0	0
			VLS 400A Green Line	2	2	4	8
			Fridge-tag 2	12	8	4	24
			TCW 40SDD	4	2	0	6
			TCW 2043SDD	1	2	0	3
		CCE obsolete- age of >=10 years	VLS154 Green Line SDD	0	0	0	0
			VLS 400A Green Line	5	7	6	18
			Fridge-tag 2	10	11	6	27
			TCW 40SDD	0	0	0	0
			TCW 2043SDD	5	5	0	10
			VLS154 Green Line SDD	0	0	0	0
		CCE obsolete- age of 8 to 10 years	VLS 400A Green Line	4	4	6	14
			Fridge-tag 2	9	9	6	24

All remaining districts CCE Expansion and Replacement Plan

Year	Priority level	Equipment Model	NWZ	SCZ	NEZ	Total
			# of equipment	# of equipment	# of equipment	
2019	Capacity gap for current and future need	TCW 40SDD	8	58	2	68
		TCW 2043SDD	0	8	5	13
		VLS154 Green Line SDD	0	0	0	0
		Fridge-tag 2	8	66	7	81
	Absorption equipment replacement age of 8 and more	TCW 40SDD	9	16	4	29
		TCW 2043SDD	1	7	6	14
		VLS154 Green Line SDD	0	0	0	0
	Compression Equipment >=10 years	Fridge-tag 2	10	23	10	43
		TCW 40SDD	5	6	1	12
		TCW 2043SDD	2	5	0	7
2020	Equipment age between 8 and 10 years	VLS154 Green Line SDD	0	0	1	1
		Fridge-tag 2	7	11	2	20
		TCW 40SDD	4	3	0	7
		TCW 2043SDD	1	1	0	2
	Replacement of CCE age less between 5 & 8 years and non-optimal	VLS154 Green Line SDD	0	0	0	0
		Fridge-tag 2	5	4	0	9
		TCW 40SDD	10	8	0	18
		TCW 2043SDD	3	11	4	18
		VLS154 Green Line SDD	0	4	0	4
		Fridge-tag 2	13	23	4	40

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):
 - o Geographically remote districts or those with low coverage
 - o 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) 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):

- a. Geographically remote districts or those with low coverage
- b. Poorer communities (e.g. in the poorest 10% of the population)
- c. Communities where gender barriers are significant and/or where low levels of female education is common (as this is often associated with lower coverage)

Coverage and Equity monitoring specific to cold chain equipment has never been done before. During the next four CCEOP years it is expected that the procurement and installation of high quality cold chain equipment will contribute positively towards the realization of the objectives of the routine immunization program as described in the cMYP 2016-2020. This current cMYP also describes the objectives of reaching those sections of the population who have not been immunized before by prioritizing new immunization points and adding outreach activities and mobile teams to reach nomadic, IDP and rural communities. Some of these outreaches require number of days hence the introduction of long term passive devices in 11 sites are considered Puntland and South Central as part of new technology and approach for such communities with limited access to services which will directly be linked to HSS II priorities.

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?

The cold chain logistics service for Somalia aims to ensure that all immunization points have high quality, well-functioning and reliable cold chain equipment to protect the vaccines wherever the services are needed. During the next 5 years, special emphasis will be placed on those newly established immunization services to ensure that they have access to such cold chain equipment and to enable them to reach these new target populations such as nomads, IDP and marginalized communities. It is projected that such cold chain equipment will support the Somalia Immunization Services to reach the following improved targets (# 4 page 44);

Indicators	Baseline 2014	2016	2017	2018	2019	2020
Increase Penta3 coverage	38.4%	48%	59%	67%	74%	84%
Increase the % of children fully immunized	4.4%	20%	30%	45%	60%	75%
Improve geographical equity - % of districts that have at or above 80% Penta3 coverage	17.6%	35%	60%	70%	80%	80%
Improve socio-economic equity – Penta3 coverage in the lowest wealth quintile is less than % points of the coverage in the highest wealth quintile	14.7%	14%	13%	11%	9%	7%

- *With the installation of SDDs (dual compartment) in remote areas, this will boost immunization coverage through outreach and mobile immunization services. The 11 passive containers planned will also support tracking of nomadic in selected facilities as a research which can be scaled up at a later stage based on the results.*
- *Stock outs that may have caused low coverage due to lack of fuel to run the cold chain facilities will be intervened with the new SDD technology.*
- *Maintenance having been a problem, with this new technology which is almost maintenance free, the programme is likely to reduce on equipment break down hence increasing availability of vaccines at the different supply chain levels*

For further information on how to redesign the system please refer to the EVM improvement plan (#7)

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

Considering the country's geographically and security scenarios, high quality cold chain CCE was considered as you cannot guarantee access to some facilities continuously. Due to maintenance and accessibility challenges, we opted for equipment that does not need regular maintenance and good warrant. Furthermore, with an effort to reduce the supply chain operational cost, the CCEOP just came in right in time to support the system design.

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

It was noted that most of cold chain stores using kerosene refrigerators have experienced contaminated kerosene which lead to HF's burning down (# 9 page 21) as shown below. Close to 25% of available CCE are using Kerosene as energy source and lack of fuel sources has greatly affected the immunization service in Somalia.

The introduction of SDD refrigerator through CCEOP will greatly reduce the running cost of cold chain equipment which is so scarce in the current context of the country. Besides, Replacement of kerosene refrigerator with optimal CCE will greatly help in reducing the maintenance and running cost of the CCE and in resulted improved quality and efficiency of the cold chain system which will ensure availability of quality and potent vaccines to reach hard to reach population and increase coverage.

The programme should embark establishing district cold chain stores were they are not available as well as equipping them with the necessary equipment's. This will help to bring services closer to the HF's and in event reduce on the unrestrained stock outs in HF's.

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:

- 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?*
- 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?*

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.)?**

- *Perform routine maintenance tasks at regular intervals to avoid/reduce CCE's downtime.*
- *Reduce the scale and cost of repairs.*
- *Increase live time of CCE*
- *Ensure that vaccines are safely stored in functional CCE thereby reducing wastage.*
- *Ensure that potent vaccines administered to children and women*
- *Keep an updated inventory database, and plan replacement/expansion of CCE*
- *Build capacity for CCE maintenance at managerial, user and technical levels.*

What is the frequency of preventative and corrective maintenance that the country commits to (supported by partners)?

The country plans to carry out weekly preventative maintenance at the service delivery levels and quarterly maintenance and other supply chain levels. However, in the HSS II plans are under way to train 55 cold chain staff on repair and maintenance (activity 2.5) as well as supporting repairs and maintenance in selected facilities. The government was tasked to look for alternative funding amounting to \$ 641,388 that will cater for the non-HSS II priority districts (# 11a page 11). A maintenance plan (#11b) clearly shows activities that will be performed at the different intervals throughout the year by different key players.

What technical support is anticipated for maintenance?

Due to lack of skilled human resource, Somalia will need technical support in terms of enhancing the capacity of technician's to be able to cop up with the CCE new technology as well supporting the country to come up with a clear deployment plan based on the country's context (being a fragile state). This support may be in terms of hiring a consultant to support capacity building trainings, daily logistical support or out sourcing a company that will maintain this delicate and expensive CCE. This practice (out sourcing) is currently being tried out in South Central Somalia where partners are managing their CCE through an institution contract and lessons learnt will provide guidance and the best way forward

b) **How will the country monitor the completion of preventive and corrective maintenance?**

Most of the weekly and monthly preventative maintenance will be carried out by the equipment user (health works) expect otherwise, and the CCT will only come in during quarterly preventive and corrective maintenance. On completion of maintenance, one has to fill the job card (for both preventative and corrective maintenance) which is shared with relevant authorities. The CCE inventory will be updated on a quarterly basis using the WHO inventory tool and it's this data that the country will rely on to confirm whether maintenance and repairs were done (# 11a page 11), however confirming the timelines of the repairs will still be a challenge

Which source(s) of funding will be used for maintenance, and to what extent are they assured?

The plan is to use HSS II funds for the targeted districts and government along partners to support bridging up the gap especially for non HSS II targeted district. This was fully discussed, agreed and documented during the development of the HSS II proposal by the senior government officials from the ministries of health

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

The government does not have clear stipulated disposal guidelines hence making it almost impossible to handle obsolete equipment. Plan are in place to start the discussion with the different MoH to publish rules and regulations in this regards. This will be supported by the planned NLWG which the country plans to establish in Q4 2017

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? Is the country's joint investment secured?*
- c) *Has the country secured import tariff exemptions for CCE? If yes, attach proof.*

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

Through UNICEF, the country will support the procurement of equipment and will support the manufacturers or representatives in planning for distribution with the use of the most compliant mode i.e. Air or road. During installation, they will be facilitated with introduction letters to the installation sites, given directions or map of installation sites and were need be they will be accompanied the MoH staff to installation sites. Technicians and HWs will be encouraged to participate in the installation as this will enhance there skills at the end of the project

What is the source of the joint investment? Is the country's joint investment secured?


- 20% contribution will be made from the Gavi HSS2 Grant 2017-2021


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

- Yes, see #12

PART D: INITIAL SUPPORT PHASE

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.
---	--

	Further information on CCE rehabilitation and expansion plan, equipment selection and strategic deployment plan requirements is provided in Annex 3 of the CCE Optimisation Platform Guidelines, available at www.gavi.org/support/apply/
---	--

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 (2018)

The need	<p>25 priority districts focused interventions: a) all new facility to be equipped as per the HSS2 guide addressing low coverage and equity including all facility found not to have CCE; b) Cold Chain Capacity gap for existing facilities, c) all absorption CCE to be replaced most of them are age of 8 and more'd), all obsoleted CCE with age of 10 years and more; e) CCE non optimal and age of 8 to 10 years.</p> <p>Additional need:</p> <ul style="list-style-type: none"> • Introduction of Long term passive devices for selected 11 sites where outreaches are challenged by longer duration to reach community with limited access to services. These 11 sites are fixed sites having to provide outreach services for nomadic populations where the service may takes days. All 11 sites will be provided SDD CCE with freezer compartment to provide the required icepack freezing capacity. • Remote temperature monitoring devices RTMDs: Introduction of RTMD at the three zonal vaccine stores and the use of RTMD for performance evaluation CCE. The three RTMDs for the 3 zonal vaccine store will installed and training provided through UNICEF support and will be sustained in the future three years other immunization partner's support.
Justification	The HSS2 Application for Somalia (Sept 2016), has identified 25 Districts as priority districts to expand immunization services to Regional and District Hospitals and MCH (service points) where routine immunization services are not existing. A total of 9 Regional and 17 District Hospitals and 36 MCH

	<p>(immunization points) are expected to be reached to enable them to deliver routine immunization services. Besides, 10 District Vaccine store are going to be established to improve availability of vaccine in the proximity of cluster of facilities.</p> <p>These new District stores will make vaccines available to the 25 priority districts identified by the HSS2 Application. These stores will enable a more robust supply chain in these districts and improved stock availability for this currently marginalized population</p> <p>It is therefore an urgent priority to equip these facilities with high quality cold chain equipment.</p> <p>In addition to this, due consideration is given to facilities where outreach takes 3 to 5 days to conduct in reaching the hard to reach areas which is within the 25 priority districts.</p> <p>In order to improve the monitoring of vaccine storage temperatures at the three Zonal Vaccine Stores, RTM device is consider to ensure having remote access as per to monitoring and performance evaluation of CCE</p> <p>Existing capacity shortages at all other facilities must also be treated as priority 1 items to resolve</p>
Expected outcome	<p>An estimated 5.7m population (45% of total population) in 25 Districts will have access to routine immunization services including 24 Districts with nomadic population and 18 Districts with IDP population.</p> <p>The expected impact of this new immunization service is unknown at this stage because it has never been done before but the expected outcome is seen to be a significant driver in the increased coverage and equity for the marginalized communities with nomadic and IDP population.</p>
Total CCE budget	US \$1,527,763
<i>Prioritised (Urgent) CCE Need #2 (2019)</i>	
The need	<p>To equip all remaining levels with new technology equipment where capacity gaps exist, absorption and obsolete equipment exist and where old absorption technology is used: a) facility without CCE; b) Cold Chain Capacity gap for existing facilities, c) all absorption equipment to be replaced (most are of age of 8 and more); d) all obsolete CCE with age of 10 years and more; e) All CCE non optimal and age of 8 to 10 years.</p>
Justification	<p>All other facilities capacity gap resolution is a continuation from urgent CCE need #1 and now the replacement of old absorption technology will also help address coverage and introduction of new and underutilized vaccines with adequate capacity meeting the storage conditions requirement. This will enable the immunization program to establish routine immunization services to overcome geographical barriers and increase access to immunization.</p>
Expected outcome	<p>An estimated 7 million population (55% of total population) lives in the non-priority districts and will have the support of a robust and reliable supply chain to ensure the availability of vaccines when required. This supply chain level is required to support the expected increase in coverage and NUVI plan.</p> <p>Solar equipment will be more reliable in maintaining the cold chain and will ensure a sustainable energy source to protect the vaccines. Solar technology will also reduce the maintenance burden on the cold chain system.</p>
Total CCE budget	US \$1,754,701

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 these equipment will serve to meet their replacement/rehabilitation, expansion and extension targets. See Section 6.2 of the CCE optimisation Platform Guidelines for the definitions of replacement/rehabilitation, expansion and extension. 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	
<i>No of Equipment</i>	<i>No of sites</i>	<i>No of Equipment</i>	<i>No of sites</i>	<i>No of Equipment</i>	<i>No of sites</i>	<i>No of Equipment</i>	<i>No of sites</i>
75	56			45	17	95	95
112	80					81	81
				11 Arktek-YBC-5	11		
Total 187	Total 136	Total	Total	Total 56	Total 17	Total 176	Total 176

11. Ongoing or planned activities around other supply chain fundamentals in the initial support phase

In this section, linkages must be drawn between requested CCE Optimisation Platform support, ongoing 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 (see section 3.1 of the CCE Optimisation Platform Guidelines) 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.

At global level, Somalia is among the 57 countries experiencing a health work force crisis. The ratio of available physicians, nurses and midwives is estimated at 0.4 per 1,000 population (4 for a population of 10,000).

The emphasis of the first phases of the EPHS was to improve the quality of existing services and not to create yet more poorly functioning health facilities. One key aspect of human resource management within the EPHS was classification and clarification of the work force, to clarify whether or not a nurse or midwife has the prerequisite training and qualifications.

The cMYP plan is to have 95% managerial and technical positions staffed with qualified HR by 2020. This will involve adverting and recruiting cold chain technicians one per region, district EPI supervisors which will be followed by capacity building trainings i.e. MLM, RED,EVM.

Plans have been established to increase motivation of immunization staff through arrangement of over sea study tours for zonal and regional EPI managers plus developing a scheme on financial and non-financial incentive

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.

HMIS supervision and monitoring throughout the health system are conducted by designated health information managers from the supervision team. Each health information manager is responsible for ensuring that data are captured properly, that summary forms are accurate, and that validity checks are clean.

Planned activities will build on achievements made during the ongoing DQS. Revision and standardization of

	<p><i>paper-based data collection tools, funded by GFATM; ensuring that all MCH facilities report to the HMIS (South Central Zone) through joint collaboration between all partners; development of tools for EPI stock management, led by UNICEF (complete); conducting quarterly internal EPI data quality audits to provide feedback to the health facility level using the integrated supervisory checklist; standardizing the calculation of births and surviving infants.</i></p> <p><i>Vaccine management tools (manual vaccine control books, temperature monitoring booklets, electronic vaccine stock management tool, and vaccine utilization forms etc.) have been developed, printed and distribution is in progress to all supply chain levels. This will be followed by user training and determining the flow of information from downstream. With support from the data managers from various zones, they will help in comparing vaccine data with actual HMIS figures in order to have harmonized data which will lead to a clear action plan.</i></p> <p><i>The integration of data from outreach and mobile activities will be specifically addressed. Synthesized monitoring reports (on indicators related to immunization) will be provided and communicated once a year for EPI progress reviews</i></p>
<p>Optimised, efficient design of distribution system <i>Describe all planned or ongoing activities related to distribution system design optimisation, their sources of funding, and partner support.</i></p>	<p><i>Vaccine distribution is based on target population, planned coverage and generic wastage rates. Zones submit vaccine requisitions which are verified by UNICEF technical staff before processing for distribution. A quarterly routine vaccines and EPI logistics distribution plan implemented with campaign vaccines are distributed via chartered/commercial flights or as and when campaign dates have been confirmed by WHO. Due to the lack of capacity, both the Push and pull mechanisms are being used for vaccine supply. However, capacity of the staff at regional and zonal level is being built currently to begin vaccine forecasting and change over to the Pull mechanism.</i></p>

	<p>Capacity is also being built for the cold chain managers and staff to follow the EEFO protocol for issuing vaccine.</p> <p>All vaccine to Somalia have delivered via air and where consignments exceed the limited cargo load of 100kgs per route that UNHAS has given, charter flights are organised especially for SIAs</p>
<p>Continuous improvement process</p> <p><i>Describe all planned or ongoing activities related to continuous improvement processes, their sources of funding, and partner support.</i></p>	<p><i>The vision of the Cold Chain and Vaccine logistics management system is to provide an equitable Vaccine logistics & Cold-chain infrastructure & management for Somalia with the ultimate objective to achieve the Somalia health mandate to provide equitable and affordable health care at the highest affordable standard to all citizens, involving (among other things) the restructuring of the health care delivery systems in order to shift the emphasis from curative to preventive and promotive health care.</i></p> <p><i>During the past years, Somalia has made efforts to implement most of the 2013 EVM IP among which are:</i></p> <ul style="list-style-type: none"> - <i>Improving temperature monitoring thru procurement of CTM for the cold room and fridge tag 2 for ILR</i> - <i>Maintenance was improved thru procurement of tool kits to all regional vaccine stores, availing adequate spares parts at zonal level and procurement of CCE over last three years (260 Solar direct drive refrigerators, 50 ice-liners, 1,085 cold boxes, 29,000 ice packs, 5 cold rooms, 5 central temperature monitoring devices, 55 fire extinguishers, 480 fridge tags, 2,200 freezer indicators, 400 Q-tags, assorted cold chain spare parts, 648 voltage regulators, 2,689 vaccine carriers, 29 (15kva) & 3 (50kva) generator sets and 25 computers)</i> - <i>Standardizing, printing and distribution of vaccine stock management tools</i> - <i>Introducing vaccine utilization tools as a pilot with NGO's in Central South Somalia</i>


	<p>- Capacity building training were 68 HWs have been trained in cold chain and vaccine management.</p> <p>Most of the procurements were funded by JICA, GAVII, Japan, JHNP, CHF</p> <p>Among the ongoing activities are the;</p> <ul style="list-style-type: none"> - implementation of the new vaccine stock management tool - harmonizing HMIS data with vaccine records - capacity building and development programmes - obtaining of temperature records from the downstream levels - analysing vaccine utilization reports from pilot sites in Central South Somalia <p>Most of the above activities will be or have been funded by HSS and GAVI</p>
<p>Temperature monitoring</p> <p>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).</p> <p><u>Furthermore, describe which measures are in place to</u></p> <p>a) obtain temperature data from the various devices;</p> <p>b) act following temperature alarms (curative maintenance);</p> <p>c) in case of RTM devices, please elaborate on SOPs for each responder in the temperature monitoring system; and</p> <p>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.</p>	<p>In the past two years, the Ministry of Health made various efforts to improve the vaccine supply chain by investing in newer technologies. UNICEF procured temperature monitoring devices for all zones, regions and health facilities with a total of 1 beyond wireless central temperature monitoring system for the national vaccine store, 5 central temperature monitoring devices (multi loggers) for zonal cold rooms, 480 fridge tags 2 (for regional and MCH), 2,200 freezer indicators (for distribution purposes zonal to MCH levels) and 400 Q-tags (distribution zonal to MCH), using both polio and RI funds. We have purchased desktop computers for all zonal and regional vaccine stores which will support the archiving of temperature data and the regional cold chain officer are directly responsible for data collection in respective regions.</p> <p>According to Somalia EPI programme, vaccine from the regional vaccine store (LD) are delivered on a monthly basis and the plan is to have monthly temperature records obtained from each HF during the distribution process. Data will be initially analysed at the regional level then sent up</p>


stream later. However in case of an alarm, the HWs has to immediately escalate the problem up stream to relevant officers and actions taken as per vaccine management SOPs (temperature exclusions)

The new vaccine management SOP for safe storage and handling vaccines clearly stipulates what's supposed to be done in regards to temperature monitoring and exclusions at the different levels in the supply chain however, for the case of the NVS, the newly installed beyond wireless CTM gives opportunity for temperature alarms to be escalated (thru phone and email) to above levels as per program parameters.

PART E: SCALE-UP SUPPORT PHASE

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.
---	--

	Further information on CCE rehabilitation and expansion plan, equipment selection and strategic deployment plan requirements is provided in Annex 3 of the CCE Optimisation Platform Guidelines, available at www.gavi.org/support/apply/
---	--

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	Spare parts and Temperature monitoring device_30DTR: (a) gradual replacement of all 30 TDR as it shelf-life ends (estimated to end 2 to 3 years) and (b) annual spare parts requirement as per manufacture guide and field requirement
Justification	In order to ensure the functionality of CCE, it is important to ensure the availability of spare parts. Replacement plan of 30 DTR is a must to ensure the storage temperature monitoring system,
Expected outcome	Improved availability of spare parts leading to immediate response to break down and regular maintenance.
Total CCE budget	US \$54,823 (20% HSS co-payment = US \$10,965)

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. See Section 6.2 of the CCE optimisation Platform Guidelines for the definitions of replacement/rehabilitation, expansion and extension. 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	
<i>No of Equipment</i>	<i>No of sites</i>	<i>No of Equipment</i>	<i>No of sites</i>	<i>No of Equipment</i>	<i>No of sites</i>	<i>No of Equipment</i>	<i>No of sites</i>
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 (see section 3.1 of the CCE Optimisation Platform Guidelines) during the scale-up support phase, including their sources of funding. Responses to this section should be linked to the EVM Improvement Plan.

<p>Supply chain managers</p> <p><i>Describe all planned or ongoing activities related to improving the availability and performance of supply chain managers, their sources of funding, and partner support.</i></p>	<p>As described in initial support phase in section 11, this will play a great role that would act as the base line/ guiding principle in scaling up the process. All Lessons learnt will be put under consideration. The activities will remain more less the same as in section 11, and the targeted funding will be the HSS II</p>
<p>Data for supply chain management</p> <p><i>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.</i></p>	<p>With the introduction of the new vaccine control book and electronic stock management tool (SMT), we hope that this will help improve vaccine stock visibility at the different supply chain levels. However as described in section 11, the planned activities will remain the same only scaling them up will transpire</p>
<p>Optimised, efficient design of distribution system</p> <p><i>Describe all planned or ongoing activities related to distribution system design optimisation, their sources of funding, and partner support.</i></p>	<p>Refer to section 11</p>
<p>Continuous improvement process</p> <p><i>Describe all planned or ongoing activities related to continuous improvement processes, their sources of funding, and partner support.</i></p>	<p>Most of the planned activities require continuous improvement and currently we are relying on the HSS II funding to cover up for the coming four years, however activities listed in section 11 under continuous improvement process should be fully implemented during this process</p>
<p>Temperature monitoring</p> <p><i>Describe how the temperature monitoring system will evolve? Which devices will be used?</i></p> <p><u><i>Furthermore, describe which measures are in place to</i></u></p> <p><i>a) obtain temperature data from the various devices;</i></p> <p><i>b) act following temperature alarms (curative maintenance);</i></p> <p><i>c) in case of RTM devices, please elaborate on SOPs for each responder in the temperature monitoring system; and</i></p> <p><i>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.</i></p>	<p>All data related to temperature monitoring will be harmonized at the regional levels then shared with the national level on a monthly basis for facilities using fridge tag 2's. However, having targeted for the equipment with prepaid data logger (ten years warrant) this will enable the country to have central data location and analysis can be easy done. SOPs are already available in terms of temperature exclusions at the different supply chain levels</p>

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.

CCE

Further information on developing relevant indicators, including a list of possible data sources, is provided in Section 7.2 of the CCE Optimisation Platform Guidelines, available at www.gavi.org/support/apply/

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 if countries are procuring User independent freeze protected cold boxes and vaccine carriers; 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,⁵ such as demonstrated by remote temperature monitoring; **and**

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

Indicator <i>(Provide name of the mandatory indicator as shown above)</i>	Definition <i>(Provide definition if not already specified)</i>	Data Source <i>(identify data source)</i>	Reporting frequency <i>(Annual, semi-annual, quarterly etc.)</i>	Baseline (Year) <i>(Provide numerator and denominator for calculating percentage)</i>	Target Year 1 <i>(Provide numerator and denominator for calculating percentage)</i>	Target Year 2 <i>(Provide numerator and denominator for calculating percentage)</i>	Target Year 3 (If applicable) <i>(Provide numerator and denominator for calculating percentage)</i>
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)	National CCI & expansion and replacement plan	semi-annual,	Numerator = 136 Denominator= 436 Percentage= 31.2%	Numerator = (136-56) Denominator=436 Percentage=18.3%	Numerator = (136-56-80) Denominator=436 Percentage=0%	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;	National CCI & expansion and replacement plan	semi-annual	Numerator = 17 Denominator= 436 Percentage= 3.9%	Numerator = (17-17) Denominator=436 Percentage=0%	Numerator = 0 Denominator=436 Percentage=0%	Numerator = Denominator= Percentage=

⁵ **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 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.

3. CCE extension in unequipped existing and/or new sites:	Percentage of previously unequipped sites (providing immunization services or not, including existing sites without active devices) and new service sites being equipped with Platform eligible equipment.	National CCI & expansion and replacement plan	semi-annual	Numerator = 176 Denominator=436 Percentage=40.3%	Numerator = 95 Denominator=436 Percentage=21.8%	Numerator = (95+81) Denominator=436 Percentage=0%	Numerator = Denominator= Percentage=
4. CCE maintenance							
. 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 <i>(Provide name of the additional indicators as shown above)</i>	Definition <i>(Provide definition if not already specified)</i>	Data Source <i>(identify data source)</i>	Reporting frequency <i>(Annual, semi-annual, quarterly etc.)</i>	Baseline (Year) <i>(Provide numerator and denominator for calculating percentage)</i>	Target Year 1 <i>(Provide numerator and denominator for calculating percentage)</i>	Target Year 2 <i>(Provide numerator and denominator for calculating percentage)</i>	Target Year 3 (If applicable) <i>(Provide numerator and denominator for calculating percentage)</i>
1.							
2.							
3.							
Add more indicators HERE if needed.							