Application Form for
Cold Chain Equipment Optimisation Platform support
For November 2017

Document date: November 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:

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 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
ECF ST	**Resources to support completing this application form:** **Technological guide on 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 Support webpage: .http://www.gavi.org/soutien/processus/demander/ 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 see to it that the country will be offered their first-choice model. However, the country might also receive its second or third choice according to the equipment selected in the budget template (columns CA and CB).**

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PART A: APPLICANT INFORMATION

1. Applicant information		
Country	Central African Republic	
Date	September 2017	
Contact name	Dr Raphael MBAILAO	
Email address	mbailaoraphael@yahoo.fr	
Phone number	+236 72 22 20 45 / +236 72 10 92 68	
Total funding requested from CCE Optimisation Platform **(US $)**	*This amount must exactly equal the budget requested in the integrated model.* **US$ 2,656,286** Country co-financing: US$ 531,257 Gavi co-financing: US$ 2,125,029	
Does your country have an approved Gavi HSS support ongoing?	Yes [X]	No [ ]
	*Indicate the anticipated **final year** of the HSS support: **2019***	
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: **August 2018***	
Proposed end date for the CCE Optimisation Platform grant:	*Indicate the month and year of the planned end date of the support, based on the strategic deployment plan: **June 2019***	
Signatures *Include signed (and official) CCE Optimisation Platform application endorsement by:* *a) Ministry of Health and Ministry of Finance (or delegated authorities)* *b) Members of the Coordination Forum (HSCC/ICC or equivalent body)*	*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:* **Ministry of Health (or delegated authority)** Name: Signature: Date: **Ministry of Finance (or delegated authority)** Name: Signature: 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.

☆	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 reviewed.

2. Mandatory attachments					
No.	**Strategy/Plan/Document**	**Attached Yes/No**	**Final version (dated)**	**Duration**	**Comments**
1	Signature sheet for the Ministry of Health and Ministry of Finance, or their delegates	Yes	04 September 2017		
2	Minutes of the coordination forum meeting (ICC / HSCC or equivalent) endorsing the proposal[1]	Yes	30 August 2017		
3	National Health Sector Development Plan	Yes	Version revised in 2016	2015-2017	In the CAR because of the crisis, a Health Sector Transition Plan, which takes the place of the NHDP, was drafted in collaboration with the partners.
4	cMYP	Yes	Version revised in June 2017	2015-2017	
5	EVM Assessment	Yes	Version: June 2017	2016-2018	
6	EVM improvement plan	Yes	Version: July 2017	2017-2021	
7	EVM Annual Workplan and Implementation report for the EVM[2] improvement plan	Yes	Updated in July 2017	2017-2021	
8	WHO inventory tool/UNICEF IMT tool/Path CCEM/ CHAI[3, 4] tool	Yes	July version	2016-2017	

[1] In the case of HSS and CCE Optimisation Platform support 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 of applying for Platform support.
[3] The CCE Inventory must have been updated within no more than one (1) year of applying for Platform support.

2. Mandatory attachments					
No.	**Strategy/Plan/Document**	**Attached Yes/No**	**Version Final version (dated)**	**Duration**	**Comments**
			2017		
9	CCE Inventory Report and Facilities Segmentation Plan	Yes	Version: July 2017	2016-2017	
10	Only one document: Chapter 1: Cold chain rehabilitation and expansion plan Chapter 2: Projected coverage and equity improvement Chapter 3: Strategic deployment plan Chapter 4: Equipment selection plan	Yes	Version: July 2017	2018-2022	
11	Upkeep plan with funding and funding source	Yes	Version: July 2017	2018-2022	
12	Proof of status for CCE tariff exemptions waiver	Yes	29 August 2017	2018-2022	1498/17/MFB/DIR. CAB/ CICEFD of 29/08/17
13	Terms of Reference for the relevant coordination forum, including all sections outlined in Section 5.2 of the General Application Guidelines	Yes	7 February 2002		Decree creating the ICC
14	Minutes of the Coordination Forum meetings from the past 12 months before the proposal	Yes			
15	Other relevant documents	Yes			2016 HeRAMS Report 2017 Operational Action Plan HSS 2017-2019 Equity survey report 2014

[4] The tool must allow members of the IRC to determine how deploying equipment contributes to improving coverage and immunisation equity.

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)*

The Central African Republic has been shaken by military and political crises since December 2012. A transition process begun in January 2013 came to an end thanks to presidential and legislative elections being organised in December 2015.

The already-fragile health system, including the expanded programme on immunisation, was even more weakened. To emerge from the emergency situation and initiate investment, the Health Sector Transition Plan created to cover the period 2015-2017 defined five major strategic orientations for health system recovery. Strategic focus 3 ***(Focus3: Improve mother and child health care)*** plans to strengthen curative and preventive care, with a particular emphasis on immunisation. To this end, activities to strengthen immunisation coverage through implementation of the RED approach and re-equipping health facilities with cold chain equipment have been decided on **(See PTSS, pages 26-33)**.

The cMYP of the EPI, aligned with the PTSS in its situation analysis, has highlighted insufficiencies in the supply chain with respect to weak immunisation logistics and cold chain capacities. To improve the insufficiencies noted above, the cMYP planned corrective activities, in particular increasing the number of health facilities offering immunisation services from 47% in 2015 to 60% in 2017. This would be done through increasing district and regional storage depot capacities, with a view to introducing new vaccines--MenAfriVac in 2017 and rotavirus in 2018 **(see cMYP 2015-2017, pages 38-40)**.

In the 2017 operational action plan, the directorate of immunisation and integrated epidemiological surveillance (DSEIV) also planned to strengthen technical, material and logistics capacities, in compliance with the EVM improvement plan from the EVM assessment 2016, updated in July 2017.

The EPI cold chain equipment rehabilitation plan drafted in June 2016 after an exhaustive inventory conducted the same year, and both updated in July 2017, set itself a general objective of improving the vaccines and consumables supply chain in order to provide delivery of equitable and high-quality immunisation services.

The CCEOP platform offers an opportunity to strengthen equipment coverage for
the cold chain to benefit target populations (mother-child) in a context of crisis that the country is experiencing, by facilitating the procurement of new equipment and PQS standards.

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 a group that coordinates Government and non-Government partners' activities and investments related to the health supply chain including immunisation.

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*)

At the national level, the following bodies coordinate activities:

- **Interagency Coordination Committee (ICC) of the EPI**: the primary entity that oversees the management of activities for the Expanded Programme on Immunisation created by Ministerial Decree No. 0044 MSPP/CAB/SG/DGSPP/SPEV of 7 February 2002.
- **EPI Technical Advisory Committee EPI-TAC**: created by Decree No. 113 MSPP/CAB/SG/DGSPP/DMPM/SPEV dated March 11, 2003. Multi-sectoral and multi-disciplinary structure placed under the leadership of the General Director of Public Health and advises the ICC in decision making.

In the CAR, there is a logistics committee within the EPI-TAC that takes the place of the NLWG. This committee is responsible for coordinating logistics activities in collaboration with non-governmental partners, as well as investments connected with cold chain equipment and the vaccine supply chain. It meets in ordinary session every month. However, it can meet in extraordinary session if needed.

It includes:

- The chair of the logistics committee: Logistics and data management department head
- Committee secretary: Communication and cold chain section manager
- Members of the committee:
    - Logistics experts from other partners, in particular UNICEF, WHO, MSF, Handicap international, WFP, etc;
    - Section managers for vaccines and other supplies;
    - Maintenance and transportation section manager.

As part of this request, all partners indicated above as members of the committee were involved in preparing and drafting the different documents that go with the CCEOP application. The logistics committee was given the responsibility for leading the application process. In addition, to facilitate obtaining certain documents, in particular the exemption certificate, and the support of other ministerial departments involved,[5] a multi-sector committee was set up. All Gavi's requirements were fulfilled in order to guarantee that ICC coordination was functional, ordinary meetings were held regularly, and if needed, extraordinary meetings.

5 See memo N°347/MSHPP/DIRCAB/DGSP/DSEIV/SGDL.17 of 18 July 2017)

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 out with appropriate references 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 indicate the quantity and percentage of current CCE that: a) works; b) is PQS approved; c) is not PQS approved; and/or d) is obsolete?
h) What percent of the birth cohort is served by effectively functioning, PQS approved CCE currently?
i) Which bottlenecks can the CCE resolve in the current supply chain organisation (eg, capacity or 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?

Information is required to cover the following areas:

a) How is the country's immunisation supply chain administered? The way the supply chain is organised follows the country's health pyramid. The supply chain includes the national, regional, district and health facility levels. The first three are vaccine and supply storage and distribution levels for the programme. The health facility level is the operational level that administers antigens to the target population.

The central level has five cold rooms. Only one regional level out of seven is operational. This is Health Region 7, located in the city of Bangui. The frequency of supply can be described as follows: This region is supplied from the national level, using the Push system. For the health prefecture/district level, 30 (including the 8 Bangui districts) of them are supplied directly from the national level except for the eight health districts of the city of Bangui, which are resupplied by the region 7 storage depot.

The health centre level includes 534 service delivery points for routine immunisation, which also organise the implementation of supplementary immunisation activities (SIAs). The service delivery points for immunisation (EPI centres) are supplied by other health districts every month.

Note that annual needs on the national level for vaccine and immunisation supplies are estimated each year using the "Forecasting" tool and transmitted to UNICEF for procurement of vaccines and supplies. Then the vaccines and injection supplies are received by the

EPI directorate and stored at the central storage facility according to a twice-yearly supply frequency. District and region depots are supplied from the national level, which is managed by the logistics department, whose organisational chart is presented in figure 1 below.

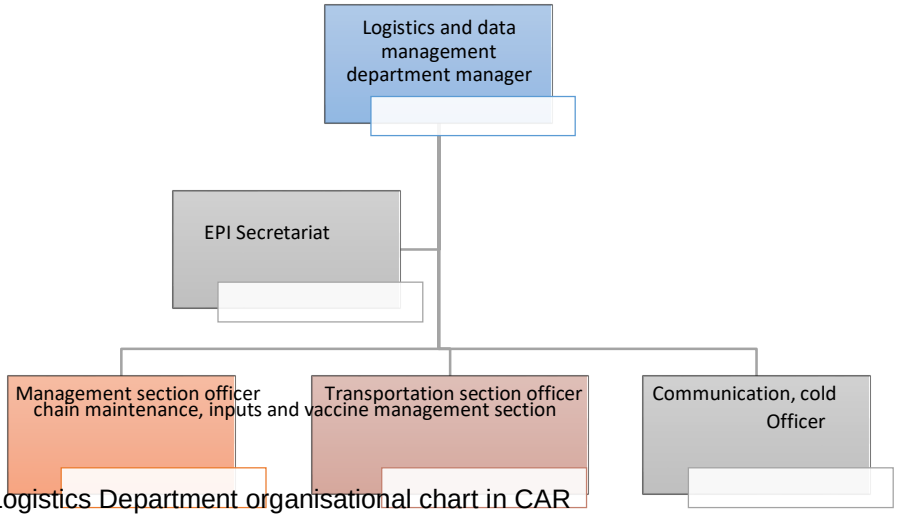

Figure 1: EPI Logistics Department organisational chart in CAR

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

The main insufficiencies noted in the supply chain are:

- Lack of qualified personnel;
- Insufficiencies in stock management (57% according to EVMA);
- Lack of financial resources to procure and resupply districts with kerosene and spare parts;
- Insufficient and antiquated transportation means to supply districts with vaccines and supplies;
- Lack of standard operating procedure for effective vaccine management;
- Lack of storage capacity at the intermediate levels (only one intermediate storage depot, Health Region 7);
- Insufficient storage capacity at operational levels;
- Insufficient temperature monitoring at the district level and immunisation service delivery points.

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

To improve the supply chain, the actions below have been taken:

- Hire staff and build staff capacity at different levels (HSS2);
- Provide solar energy CCE and vehicles (HSS2, CCEOP);
- Draft standard operating procedures for supply chain management (EPI);
- Implement a formal distribution system from the district depot to the health centres (EPI);
- Implement the EVM improvement plan and EPI Operational Action Plan;
- Procure vehicles for restocking (2 trucks and 100 motorbikes planned with HSS2);
- Create 4 intermediate depots.

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

The security situation in some areas makes it difficult to hold immunisation activities. Also, mobilising domestic resources has been an enormous challenge.

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

With the support of partners, the CAR received 204 solar refrigerators that were installed in health districts and immunisation units with priority given to difficult to access areas where resupplying kerosene is problematic.

To this end, 25 operational-level workers have been trained, and 21 districts have been given installation and maintenance kits. This made it possible to continue and finalise refrigerator installation at the operational level after the installation phase completed by the national level.

Results achieved include:

- Help to improve DTP-HepB-Hib3 immunisation coverage from 47% in 2015 to 54% in 2016;
- Build capacity and provide 25 workers with kits for installation and preventive maintenance of equipment;
- Reduce the cost of supplying kerosene for service delivery points and depots for districts provided with solar energy cold chain equipment;
- Reduce cold chain outages because of lack of kerosene in the districts concerned.

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

According to the 2016 inventory updated in 2017, out of 534 immunisation service delivery points, only 37, or 7%, of facilities are powered by the national electrical grid for a duration of 8 hours or more per day.

g) Please indicate the quantity and percentage of current CCE that: a) works; b) is PQS approved; c) is not PQS approved; and/or d) is obsolete?

a) Works = 451, or 64%;
b) PQS approved = 238, or 33%;
c) Not PQS approved: not PQ = 27, or 4% and PIS = 439, or 62%
and/or d) is obsolete = 466, or 66%.

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

According to the 2016 CCE inventory updated in 2017, 709 cold chain equipment items were inventoried in 534 immunisation service delivery points and in storage depots.

The birth cohort that is served by effectively functioning, PQS-approved CCE is 32%.

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

Procuring CCE will help address the supply chain bottlenecks below:
- Poor cold chain equipment coverage at the service delivery point level;
- Insufficient storage capacity at the service delivery point and district depot levels;
- High operational and maintenance costs to supply kerosene and for related expenditures (costly to transport);
- High percentage of non-PQS equipment, estimated at 66% in the country.

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

Expanding district depots will make it possible to bring the inputs closer to the service delivery points,

and also strengthen district depot storage capacity, thus reducing the supply delivery time, costs inherent to travel and stock-outs of vaccines and inputs. The support will make it possible to reduce inequities in the provision of immunisation services and cut down on purchases of kerosene for the supply chain.
Equipping immunisation units with solar refrigerators will mitigate for some and eliminate for others the problem of cold chain outages due to a lack of kerosene. Support for the platform will help improve immunisation coverage and reduce drop-outs.

k) What are the overall CCE needs?
A breakdown of overall needs for the CAR (401 CCE items) can be found in the table below.

Table II: **Breakdown of CAR cold chain equipment requirements by supply level and type of equipment**.

Niveau	Types d'équipement	2019	2020	Total équipements
Total des points de prestation	solaire 70 litres plus compartiment congélation	10	0	10
	solaire 36 litres plus compartiment congélation	53	0	53
	solaire 16 litres plus compartiment congélation	308	0	308
	Glacière a longue durée de congélation	8	0	8
Districts/prefectures/circonscriptions sanitaires	solaire 70 litres plus compartiment congélation	12	8	20
	Congélateur solaire 64 litres	2	0	2
TOTAL EQUIPEMENTS		**393**	**8**	**401**

In total, the CAR needs: 30 70-litre solar refrigerators with a freezer compartment, 53 36-litre solar refrigerators with a freezer compartment, 308 16-litre solar refrigerators with a freezer compartment, 8 long-range cold boxes
and 2 64-litre freezers.

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 (list 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) 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)

The "equity" approach means that the needs of the poorest citizens are put at the forefront and the most vulnerable and most difficult to reach populations receive immunisations. The Central African Republic (CAR) is one of the regions in the world where there are still marginalised children with regard to immunisation. The country has undergone decades of recurrent conflict, with deleterious consequences on basic social infrastructure, in particular in the area of health[6].

There is in fact a component of the central African population (Pygmies) that by nature lives in areas (forests) that are difficult to access for immunisation services. The districts of Mbaïki, Boda and Sangha-Mbaéré where a large part of the Pygmy community is concentrated, have noted a lack of storage capacity. The shortage of district storage depots will be filled as part of the CCEOP. An extension of 11 service delivery points is planned, and equipment is to be replaced for 28 service delivery points. This intervention will make it possible to increase PQS equipment coverage from 12%, 17% and 50% to 100% in the districts of Mbaïki, Boda and Sangha-Mbaéré.

The extension of 23 service delivery points in the districts of Ouham (with 10,936 unimmunised children in

[6] Survey report on "equity in immunisation in a crisis situation in CAR"

2016) and Nana-Mambéré will help improve the delivery of immunisation services to cover nomadic populations during the transhumance period.

Despite the low population density of the isolated districts (Bamingui-Bangoran, Mobaye-Zangba, Kembe-Satema, Alindao-Mingala, Ouango-Gambo), through the CCEOP, 16 service delivery points are planned to be extended and equipment in 28 service delivery points is to be replaced with efficient, sturdy and autonomous solar energy equipment.

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?

Situational analysis by component in the cMYP noted an insufficiency in the supply system characterised by the lack of sub-national storage depots (only one out of seven) and also a lack of transportation means at different levels of the system. This is why the creation of four regional storage facilities is planned for storing vaccines and other inputs, in order to reduce the supply delivery time between the districts and the national level. As part of strengthening the supply chain distribution system, the rehabilitation plan, the EVM improvement plan and the Gavi-HSS2 project provide for the creation of regional storage facilities, and the procurement of 2 trucks, 100 ice boxes and 200 vaccine carriers.
All of the above will be strengthened through implementation of the CCEOP and will make it possible to help achieve coverage and equity goals.

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

The lack of regularity in resupplying kerosene to service delivery points, to district storage facilities, and the poor connection of facilities to a reliable electrical network led the CAR to choose photovoltaic equipment.

Geographical access challenges with their consequences on supply frequency, and added to this, the permanent displacement of populations from conflict zones towards areas that are more or less calm, led to the choice of equipment with sufficient capacity to guarantee the availability of vaccines for beneficiaries.

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

Platform support will make it possible to reduce the purchase and transportation costs of kerosene to operate absorption refrigerators. These funds could be used to strengthen the sustainability of the supply chain system by emphasising the other fundamental activities:
Leadership: Improving the skills of health workers;
Data management: Reproduction of supply and vaccine management materials/tools; **equip supply chain:** Procure individual protection equipment
Continued improvement of the supply chain: Purchase of fuel for generator at national level;
Optimise the supply chain: Restocking of vaccines and supplies in districts and health facilities.

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, funding for maintenance, etc.)?
- *What is the frequency of preventive 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 funding source(s) will be used for upkeep? To what extent are they secured?*

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

a) How will the country ensure that certain aspects of cold chain maintenance will be guaranteed (eg preventive and corrective maintenance, monitoring of functionality, technicians, funding for upkeep, etc)?

How maintenance is organised is structured according to the health pyramid. Preventive maintenance is provided by equipment users. With the purchase and deployment of solar energy refrigerators in 2014-2016, 25 EPI managers and maintenance technicians were trained in using and maintaining photovoltaic cold chain equipment. The CAR, with the support of UNICEF, equipped the districts with 21 installation kits for curative and preventive maintenance of equipment. Thus, in each district, there is at least one technician trained on maintaining solar cold chain equipment. Follow-up on equipment maintenance will be completed through supervisions at various levels[7].

The country plans to hire and train nine workers specialised in curative maintenance, who will be equipped with maintenance kits and who will be assigned as follows: In the health regions, seven workers (one technician per region) and two at the national level for curative maintenance of equipment. This deployment will make it possible to decentralise interventions.

Analysing supervision materials will make it possible to follow the trends in indicators achieved throughout each year.

Maintenance activities will be funded from both the Gavi-HSS2 project and the country[8].

All of these different maintenance activities will be coordinated by the CCEOP project team. Feedback from these supervisions will be presented during the directorate task forces, EPI-TAC meetings, joint meetings with programme partners, in particular WHO and UNICEF, and during the coordination and monitoring meeting at different levels.

It is anticipated that the Directorate for Development of Health Infrastructure will provide technical support for equipment upkeep through its technical maintenance service. There is also a preventive maintenance contract with a private company for national level equipment.

[7] *See: Maintenance plan, V monitoring-evaluation, 5-2 monitoring mechanisms*

[8] *See: Maintenance plan, VI plan budgeting*

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

- **Which funding source(s) will be used for upkeep? *To what extent are they secured?***

The country will see to it that corrective and preventative maintenance will be completed by implementing a CCEOP project monitoring committee. This committee will plan supervisions/verifications in health centres where the equipment is installed and will provide technical support. At the end of the project, the DSEIV will take over through routine supervisions. The government budget and part of the HSS funds will be the main sources of funding for equipment upkeep. Funds allocated for equipment maintenance will be guaranteed by having a budget line labelled “Allocation for the Expanded Programme on Immunisation investment project.”

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

All equipment at the end of their life cycle will be taken for scrap (disposal) in compliance with current national procedures. In order to comply with environmental standards, the EPI will call for support from other ministries with relevant experience in the area.

8. Other implementation arrangements *(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.

a) Through the deployment plan, the country will facilitate reception, storage, transportation and preparation of installation sites.

The monitoring committee that will be assume the role of project management committee will facilitate supplier responsibilities through the following assignments to coordinate and implement platform activities:

- Monitor country co-financing disbursement;
- Monitor equipment orders;
- Update the operational deployment plan;
- Prepare installation sites;
- Exempt CCE from customs duties;
- Receive and store CCE;
- Facilitate transportation of CCE to sites;
- Support for putting together installation teams;
- Support for user training;
- Support for implementing the plan to monitor installation quality, and collect information on cold chain equipment performance.

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

The source of the joint investment comes from the Gavi-HSS2 project. This investment is secured through the line:

- **Objective 2:** Ensure conditions and quality of delivery for promotional, preventive and curative health services in compliance with MPAs in regions 1, 2 and 3.
- **Activity 2.4:** Procure 100 solar refrigerators and the cold rooms for intermediate storage facilities.

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

This country agrees to deliver an exemption certificate for customs fees and will cover (with its partners) transit costs for equipment procured as part of the CCEOP. Attached for this purpose is the exemption certificate requested.

PART D: INITIAL SUPPORT PHASE

This **initial support phase (approximately years 1 and 2**) is designed to meet urgent CCE needs that will support sustainable attainment of coverage and equity, protecting vaccine stocks, and supplementing investments in other "fundamentals," implementing optimisation of the supply chain in the long-term.

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

ECF	Additional information on requests for the CCE rehabilitation and expansion plan, choice of equipment and strategic deployment plan are shown in appendix 3 of the CCE Optimisation Platform Guidelines, available at http://www.gavi.org/soutien/processus/demander/

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 (eg replacing obsolete CCE equipment, adding CCE to facilities that are not equipped, etc); site (facility) specific CCE; type of equipment required; quantity of devices.*
2. ***Justification:** reasons for urgent need (eg low immunisation (Penta3) and/or CCE coverage area, obstacles to parity, mobile population, etc); current immunisation (Penta3) and CCE coverage in the population area.*
3. ***Expected outcome:** anticipated increase in CCE and immunisation coverage (Penta3) coverage; 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	
Need	Expansion, extension and rehabilitation/replacement of CCE in districts and immunisation service delivery points for health regions 1, 2, 3 and 7. This need is for 264 equipment items.
Justification	- Health regions 1, 2 and 3 are areas covered by the Gavi-HSS2 project, the source of CCEOP co-financing. - These areas are densely populated: 53% of the total population, accessible, with a relatively stable security situation. - High concentration of special populations (Pygmies and nomads) in health regions 2 and 3.
Expected outcome	The CCE-PQS coverage will be improved from 27% in 2017 to 100% in 2019 in densely populated areas and special populations.
Total CCE budget	One million seven hundred eighty-seven thousand seven hundred twenty-eight dollars (US$ 1,787,728).

Prioritised (Urgent) CCE Need #2	
Need	Expansion, extension and rehabilitation/replacement of CCE in districts and immunisation service delivery points for health regions 4, 5 and 6. This need is for 137 equipment items.
Justification	These areas are geographically isolated, with low population density (0.9 inhabitants/km^2 for the Bamingui-Bangoran prefecture). These regions have low immunisation coverage (11% for Penta 3 for the Vakaga health prefecture and 12% in the Mobaye-Zangba health district in 2016). These areas are difficult to access because of a volatile and unstable security situation.
Expected outcome	The CCE-PQS coverage will improve from 37% in 2017 to 100% in 2020 in isolated and low immunisation coverage areas.
Total CCE budget	Eight hundred sixty-eight thousand, five hundred fifty-eight dollars (US$ 868,558).
GENERAL CCE BUDGET TOTAL: Initial support (Years 1 and 2)	Two million six hundred fifty-six thousand two hundred eighty-six dollars (US$ 2,656,286).

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

All countries must complete this section to fill in the number of equipment items and sites where the platform equipment will replace/rehabilitate, expand or extend the cold chain according to the country's objectives. See Section 6.2 of the CCE Optimisation Platform Guidelines for definitions of replacement/rehabilitation, expansion and extension. The data entered into the table below must match the data in section 9 above and other sections of the form.

	Replacement/Rehabilitation (237)				**Expansion (21)**		**Extension (143)**	
	Existing sites with existing NON-PQS equipment (not functioning) that must be replaced with ILR, SDD or long-range cold box equipment (includes sites with bulky equipment)		Existing sites with PQS equipment (obsolete and non-functional) that must be replaced by ILR, SDD or long-range cold box equipment (includes sites with bulky equipment)		Equip existing sites with ADDITIONAL equipment in order to handle the introduction of new vaccines and/or serve a growing population.		Equip existing sites and new service delivery points (includes sites offering or not offering immunisation and sites lacking active equipment [refrigerator]) to be equipped with platform equipment	
	No. of equipment	No. of sites	No. of equipment	No. of sites	No. of equipment	No. of sites	No. of equipment	No. of sites
	230	230	07	07	21	13	143	143
Total	230	230	07	07	21	13	143	143

11. Ongoing or planned activities around other supply chain fundamentals in the initial support phase	
In this section, connections must be established between the support request relative to the CCE Optimisation Platform, existing Gavi investments (in particular through support for health system strengthening) and supply chain support by other partners. *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.*	Train a supply chain manager in LOGIVAC year group 2017. As part of the Gavi-HSS2 project, the following is planned: - Train health workers on the DVD-MT tool. As part of the Gavi-HSS2 project, the following is planned: - Supportive supervisions of DMTs/RMTs on EPI management; - Hire 2 logistics experts.
Necessary data for supply chain management *Describe all planned or ongoing activities related to management data, 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.*	As part of the Gavi-HSS2 project, the following is planned: - Produce and disseminate documents, create documentary resources; - Provide satellite internet and computer equipment; - Prepare a forecast on an annual basis; - Monthly analysis of SMT.
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.*	The country received 4x4 vehicles and motorbikes for health prefectures/districts that will be used to distribute vaccines and supplies. As part of the Gavi-HSS2 project, the following is planned: - Procure three generators for health districts (L'Ouham-Pende, Bimbo, Nana-Mambéré) - Rehabilitate 3 health districts - Procure 100 cold boxes and 200 vaccine carriers - Procure 2 trucks, 6 vehicles, 100 motorbikes and 100 bicycles.
Continuous improvement process	As part of the Gavi-HSS2 project, the following is

Describe all planned or ongoing actions relative to management data, their funding sources and partner support.	Planned: - Effective Vaccine Management Assessment; - Preventive maintenance contract for cold rooms.
Temperature monitoring *Describe the temperature monitoring devices that are currently available in the country? E.g. national level (CTMS), sub-national, lowest distribution and service delivery levels (30 DTR and RTM devices), and during transportation (freeze tags - electronic temperature monitoring for freeze-sensitive goods).* *Also describe measures in place for:* *a) Obtaining temperature data from different 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 procure these tools should show that recurring costs for their use, such as HR and data transmission and analysis will be included and filled out in this section.*	At the central level, cold rooms (3/5) are equipped with continuous temperature loggers making it possible to remotely control sudden rises in temperature recorded by the cold chain equipment. The types of loggers are the Beyond Wireless for the 3 positive cold rooms and the fridge -tag2 in health facilities. The DSEIV has planned to draft SOPs on temperature monitoring. Training logistics experts and EPI managers on using the temperature monitoring tools is planned at every level. Data will be transmitted up to the next level, which will analyse them and give feedback.

PART E: SCALE-UP SUPPORT PHASE

This second phase of Gavi CCE Optimisation Platform support will be provided from approximately year 3 onwards. This phase should include additional cold chain equipment needs as part of supply chain optimisation and sustainability.

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

ECF	Further information on the 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 http://www.gavi.org/soutien/processus/demander/

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, and equipment selection and strategic deployment plan'.*

For each prioritised (additional) CCE need, please provide the following information:

1. ***The need:** type of activity (eg replacing obsolete CCE equipment, adding CCE to facilities that are not equipped, etc); site (facility) specific CCE; type of equipment required; quantity of devices.*
2. ***Justification:** for urgent need (eg low immunisation (Penta3) and/or CCE coverage area, obstacles to parity, mobile population, etc); current immunisation (Penta3) and CCE 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	
Need	Not applicable
Justification	
Expected outcome	Not applicable
Total CCE budget	Not applicable
Prioritised (Additional) CCE Need #2	
Need	Not applicable
Justification	Not applicable
Expected outcome	Not applicable
Total CCE budget	Not applicable

Prioritised (Additional) CCE Need #3	
Need	Not applicable
Justification	Not applicable
Expected outcome	Not applicable
Total CCE budget	Not applicable
Prioritised (Additional) CCE Need #4	
Need	Not applicable
Justification	Not applicable
Expected outcome	Not applicable
Total CCE budget	Not applicable
GRAND TOTAL CCE BUDGET: "Scale-up support" (Years 3, 4 & 5)	Not applicable

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

All countries must complete this section in order to supply information on the number of equipment items and sites where platform
equipment will replace/rehabilitate, expand or extend the cold chain according to country objectives. See Section 6.2 of the CCE Optimisation Platform Guidelines for definitions of replacement/rehabilitation, expansion and extension. The data entered into the table below must be aligned with the data in section 9 above and with the other sections of the form.

	Replacement/Rehabilitation				**Expansion**		**Extension**	
	Existing sites with existing NON-PQS equipment (not functioning) that must be replaced with ILR, SDD or long-range cold box equipment (includes sites with bulky equipment)		Existing sites with PQS equipment (obsolete and non-functional) that must be replaced by ILR, SDD or long-range cold box equipment (includes sites with bulky equipment)		Equip existing sites with ADDITIONAL equipment in order to handle the introduction of new vaccines and/or serve a growing population.		Equip existing sites and new service delivery points (includes sites offering or not offering immunisation and sites lacking active equipment [refrigerator]) to be equipped with platform equipment	
	No. of equipment	No. of sites	No. of equipment	No. of sites	No. of equipment	No. of sites	No. of equipment	No. of sites
	Not applicable	Not appli cable	Not applicable	Not appli cable	Not applicable	Not appli cable	Not applicable	Not appli cable
	Not applicable	Not Applicable	Not applicable	Not Applicable	Not applicable	Not Applicable	Not applicable	Not Applicable
	Not applicable	Not appli cable	Not applicable	Not appli cable	Not applicable	Not appli cable	Not applicable	Not appli cable
	Not applicable	Not Applicable	Not applicable	Not Applicable	Not applicable	Not Applicable	Not applicable	Not Applicable
	Not applicable	Not appli cable	Not applicable	Not appli cable	Not applicable	Not appli cable	Not applicable	Not appli cable
Total	Not applicable	Not Applicable	Not applicable	Not Applicable	Not applicable	Not Applicable	Not applicable	Not Applicable

14. Ongoing or planned activities around other supply chain fundamentals in the scale-up support phase	
In this section, connections must be established between the support request relative to the CCE Optimisation Platform, existing Gavi investments (in particular through support for health system strengthening) and supply chain support by other partners. *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.*	
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.*	Not applicable
Necessary data for supply chain management *Describe all planned or ongoing activities related to management data, their sources of funding, and partner support. In particular, please specify how improvements in the functionality of logistics management systems will increase the visibility of updated and accurate information on vaccine stocks at each level of the vaccine supply chain.*	Not applicable
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.*	Not applicable
Continuous improvement process *Describe all planned or ongoing activities related to continuous improvement processes, their sources of funding, and partner support.*	Not applicable
Temperature monitoring *Describe how the temperature monitoring system will evolve? Which devices will be used? Also describe measures in place for:* *a) obtaining temperature data from different 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 procure these tools should show that recurring costs for their use, such as HR and data transmission and analysis will be included and filled out in this section.*	Not applicable

PART F: BUDGETING MODEL

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 embedded budget template, and with reference to the **CCE Optimisation Platform Guidelines, 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 out by **ALL** countries after selection of equipment that best suit their CCE needs (e.g. specific model or make).*

Countries will establish their budgets using the indicative PQS costs and estimates for corresponding service packages (depending on if the equipment is in or out of network and depending on estimated costs of the service package).

Planning price ranges are provided in this template.

How to complete the budget template: countries must:

- *Select the appropriate equipment model from the list of equipment. This list is based on "type of equipment and energy source"*
- *Fill in the "indicative cost of service packages" as well as "number of equipment items."*
- *In cells **CA** and **CB** of the worksheet "Choice of specified CCE model" (to the right of the table "CCE TOTAL OPTIMISATION PLATFORM REQUEST") countries must fill in their second and third preference for each model selected.* Both preferences must be from the same "vaccine storage capacity category in L" as their selected model. **Gavi and the members of the Alliance, especially UNICEF, will do whatever is necessary so that the countries receive their first-choice equipment. However, manufacturing delays, among other things, could result in the country receiving "cost estimates" for their second or third choice.**

The budget template must be sent at the same time as the completed form.

Budget for additional costs and UNICEF procurement expenses:

- ***Additional cost**: a fee of 7% additional out of the country's total annual request was incorporated into the budget template. This amount will be used, for example, to account for the exchange rate, budgetary variability in regards to equipment, differences in cost relative to service packages, to demurrage and related costs, or quite simply implementation of the protocol deviation. This amount will be returned to the country if not used.*

- ***UNICEF Procurement Expenses:** Countries must pay UNICEF annual procurement fees on their joint investment only. These fees will be less than or equal to 8.5% of the country joint investment/ Countries are encouraged to ask for this amount from the UNICEF country office.*

PART G: PERFORMANCE FRAMEWORK

Countries must include **CCE Optimisation Platform indicators** into the support request as well as in the performance framework for the current and/or proposed Gavi HSS support, after 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.

ECF	Further information on implementing relevant indicators, including a list of possible data sources, is provided in annex 7.2 of the CCE Optimisation Platform Guidelines, available at http://www.gavi.org/soutien/processus/demander/

17. Indicator monitoring and reporting requirements

*As a **minimum**, countries need to monitor and report on:*

- ***5 MANDATORY intermediate results indicators;***
- ***1 MANDATORY intermediate result indicator if countries are procuring user independent freeze protected cold boxes and vaccine carriers; and***
- ***1 to 3 ADDITIONAL intermediate results indicator(s).***

***MANDATORY intermediate results indicators** (must include baseline, data source, targets and frequency of reporting):*

1) ***Replacement/Rehabilitation of CCE at sites with equipment:*** Percentage of existing sites (with or without equipment) with existing NON-PQS equipment (not functioning) and PQS equipment (obsolete and not functional) that must be replaced with ILR, SDD or long-range cold box equipment (includes sites with bulky equipment);
2) ***Expansion of CCE in sites with equipment:*** *Percentage of existing sites that need to be equipped with ADDITIONAL equipment in order to*

handle the introduction of new vaccines and/or serve a growing population;

3) **Extension of CCE to new sites *existing sites with no equipment*:** *Percentage of new service delivery points (includes sites offering or not offering immunisation and sites lacking active equipment [refrigerator]) to be equipped with platform equipment;*

4) Maintenance for cold chain equipment: *Defined indicator proposed by the country to reflect appropriate equipment upkeep; for example, the percentage of facilities equipped with a working cold chain,[9] such as shown by remote temperature monitoring**;***

5) ***Ratio of freeze-free/not freeze-free:*** *Percentage in the country of freeze-free cold boxes/vaccine carriers vs. cold boxes/vaccine carriers that are not freeze-free*

PLEASE USE THE TABLE BELOW TO COMPLETE THE MANDATORY INDICATORS

Indicator *(enter the name of the indicator as indicated above)*	***Definition*** *(Provide a definition if no definition is specified)*	***Data source*** *(identify the source of data)*	***Frequency*** *(annual, twice-yearly, quarterly, etc)*	***Baseline value (year)*** *Specify the numerator and the denominator for the percentages*	***Year 1 objective*** *Specify the numerator and the denominator for the percentages*	***Year 2 objective*** *Specify the numerator and the denominator for the percentages*	***Year 3 objective*** *Specify the numerator and the denominator for the percentages*
Replacement/Rehabilitation of CCE in sites with equipment	Percentage of existing sites (equipped or not equipped) with existing NON-PQS (non-functioning) *equipment and*	*The tool and the 2016 inventory report updated in July 2017*	*Quarterly*	*Numerator =* ***Number of existing sites with NON-PQS equipment,***	*Numerator =* ***163 sites*** *Denominator* ***= 230 sites to equip***	*Numerator =* ***230 sites*** *Denominator* ***= 230 sites to equip***	*Numerator =* *Denominator =* *Percentage =*

[9] **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. The numerator and the denominator must be collected from the same geographic area/time period and must not include failed equipment. Functionality of CCE is broadly defined to mean that the device is operable at a particular point in time for storing vaccine.

	PQS equipment (obsolete and non-functional) that must be replaced by ILR, SDD or long-range cold box equipment (includes sites with bulky equipment)	*Monthly installation report*		***Equipped, 0 sites*** *Denominator* ***= 230 sites to equip*** *Percentage =* ***0%***	*Percentage =* ***71%***	*Percentage =* ***100%***	
Expansion of CCE in sites with equipment	*Percentage of existing sites that need to be equipped with ADDITIONAL equipment in order to handle the introduction of new vaccines and/or serve a growing population*	*The EPI-Forecasting tool and the 2017 rehabilitation plan* *Monthly installation report*	*Quarterly*	*Numerator =* ***0*** *Denominator =* ***13*** *Percentage =* ***0 %***	*Numerator =* ***11*** *Denominator =* ***13*** *Percentage =* ***85 %***	*Numerator =* ***13*** *Denominator =* ***13*** *Percentage =* ***100%***	*Numerator =* *Denominator =* *Percentage =*
Extension of CCE to new sites existing sites with no equipment	*Percentage of new service delivery points (includes sites offering or not offering immunisation and sites lacking active equipment [refrigerator]) to be equipped with equipment from*	*The tool and the 2016 inventory report updated in July 2017* *Monthly installation report*	*Quarterly*	*Numerator =* ***0*** *Denominator =* ***143*** *Percentage =* ***0%***	*Numerator =* ***83*** *Denominator =* ***143*** *Percentage =* ***58%***	*Numerator =* ***143*** *Denominator =* ***143*** *Percentage =* ***100%***	*Numerator =* *Denominator =* *Percentage =*

	platform						
Cold chain equipment maintenance	*Percentage of districts with an annual maintenance plan for cold chain equipment*	*The cold chain equipment maintenance plan for the District*	*Annual*	*Numerator = **0*** *Denominator = **30*** *Percentage = **0%***	*Numerator = **30*** *Denominator = **30*** *Percentage = **100%***	*Numerator = **30*** *Denominator = **30*** *Percentage = **100%***	*Numerator = **30*** *Denominator = **30*** *Percentage = **100%***
Cold chain equipment maintenance	*Percentage of districts with an annual maintenance plan for cold chain equipment*	*The cold chain equipment maintenance plan for the District*	*Annual*	*Numerator = **0*** *Denominator = **30*** *Percentage = **0%***	*Numerator = **30*** *Denominator = **30*** *Percentage = **100%***	*Numerator = **30*** *Denominator = **30*** *Percentage = **100%***	*Numerator = **30*** *Denominator = **30*** *Percentage = **100%***
Ratio of freeze-free/not freeze-free:	*Percentage of freeze-free cold boxes/vaccine carriers vs. cold boxes/vaccine carriers that are not freeze-free in the country*	*Not applicable*	*Not applicable*	*Not applicable*	*Not applicable*	*Not applicable*	*Not applicable*

***ADDITIONAL intermediate results indicator(s)**: Countries are required to suggest 1 to 3 intermediate results indicator(s) 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. *Stock in compliance with the plan: percentage of facilities/stores/districts with stocks between the 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 orders completely delivered on time; **or***
8. *Number of health managers trained and sent to monitor the supply chain and rate of monitoring activities reported.*

PLEASE USE THE TABLE BELOW TO COMPLETE THE ADDITIONAL INDICATORS

Indicator *(Enter the name of the additional indicator)*	***Definition*** *(Provide a definition if no definition is specified)*	***Data source*** *(identify the source of data)*	***Frequency*** *(annual, twice-yearly, quarterly, etc)*	***Baseline value (year)*** *Specify the numerator and the denominator for the percentages*	***Year 1 objective*** *Specify the numerator and the denominator for the percentages*	***Year 2 objective*** *Specify the numerator and the denominator for the percentages*	***Year 3 objective*** *Specify the numerator and the denominator for the percentages*
*1. **Full availability of***	*ratio of prefectures/precincts/districts*	*SMT, order*	*Quarterly*	*Numerator = **0***	*Numerator = **10***	*Numerator = **18***	*Numerator = **21***

stocks	*No stock-outs*	*form, delivery slip, activity report for districts*		*Denominator = **30*** *Percentage = **0%***	*Denominator = **30*** *Percentage = 33%*	*Denominator = **30*** *Percentage = **60%***	*Denominator = **30*** *Percentage = **70%***
Add additional ICI indicators if necessary							