

PROCUREMENT GUIDELINES

**GENERAL PROCUREMENT
GUIDELINE FOR COLD
CHAIN EQUIPMENT**

General Procurement Guideline for Cold Chain Equipment

Key information for UNICEF staff and partners, ensuring the effective and efficient procurement of Cold Chain equipment.

This module gives general guidance to the procurement of Cold Chain Equipment.

Always make sure that you have the latest version of this document by checking the [CCSP website](#).

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Suggestions and feedback: sd.coldchain@unicef.org

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Acronyms

CCSP	Cold Chain Support Package
CO	Country Offices
DOA	Direct Order Arrangement
EMP	Essential Medicines and Health Products
LTA	Long Term Arrangement
PQS	Performance Quality and Safety
PQT	Prequalification Team
PO	Purchase Order
PS	Procurement Services
PQT	Pre-Qualification Team
SD	Supply Division (UNICEF)
TAD	Target Arrival Date
WHO	World Health Organization
WIC	Walk-In Cold Room
WIF	Walk-In Freezer Room

1 Introduction

Before implementing immunization programmes, a fully functional Cold Chain system for receiving, storing and delivering the vaccines must be ensured. General information about the role of Cold Chain in immunization programmes can be found [here](#)¹. The UNICEF Supply Division (SD) provides commercial and technical guidance to Country Offices (COs) and Procurement Service (PS) partners on Cold Chain equipment to support efforts to:

- Ensure that safe and potent vaccines are delivered and administered to children and mothers;
- Reduce country cost for the procurement of vaccines for the EPI Programmes by minimizing vaccine wastage;
- Minimize downtime of Cold Chain equipment by supplying sufficient spare parts;
- Sensitize countries on the necessity for Cold Chain equipment inventories at all levels; and
- Keep abreast with new technologies and innovations in cold chain equipment.



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UNICEF SD responds to emergencies by packing and airlifting health, medical and shelter equipment and supplies from its Copenhagen Warehouse. Cold Chain equipment is shipped directly from suppliers to countries.

All UNICEF procurement of Cold Chain products is to be done through UNICEF Supply Division. Eligible partners can use the Procurement Services mechanism to procure Cold Chain equipment. For more details on this mechanism please refer to the [Procurement Services website](#).

This Procurement Reference Guide provides guidance that applies to procurement of Cold Chain products and services in general. More details, both commercial and technical, can be found in the [product-specific procurement guidelines](#).

2 UNICEF Supply Catalogue

The [UNICEF Supply Catalogue](#) includes a list of available Cold Chain products with corresponding material numbers. The Catalogue is designed to help countries identify the most appropriate supplies for their programmes, assist in procurement planning, delivery and monitoring, and help maximizing collaboration with UNICEF Supply Division.

3 WHO Pre-qualification

UNICEF SD procures pre-qualified equipment that conforms to the WHO guidelines for programme countries. The WHO Department of Essential Medicines and Health Products (EMP), Prequalification Team (PQT) sets standards and prequalifies vaccines and related products, including a range of Cold Chain equipment. These standards are documented in the WHO PQS (Performance, Quality and Safety) manual, which is being updated on a continual basis. The [WHO PQS Catalogue](#) is accessible online.

¹ UNICEF public website '[What is a cold chain?](#)'

Except for ultra-low temperature freezers, blood bank and laboratory refrigerators & freezers, all other commodities procured by SD's Cold Chain Unit (CCU) are under WHO/PQS listing. In cases where the equipment needs cannot be fulfilled by SD, Country Offices can opt for local procurement following the guidance provided under section 10 "Local Procurement Authorization".

4 How to Order

4.1 The Ordering Process

UNICEF SD should be consulted at an early stage with regards to setting a realistic timeframe for the order and determining the necessary budget. SD in conjunction with the CO/PS partner and the supplier will make the necessary considerations to start and complete all activities related to the procurement and delivery of goods and services, in a cost-effective manner and as per the time schedule.

One of the essential steps in the ordering process is the screening, where the country requests is reviewed by the Cold Chain technical and commercial teams to identify suitable products meeting the needs. This process is conducted by assessing available options in the market and offering them to the partner, along with comprehensive information about prices, delivery conditions and lead times.

The individual program setup and any other specific requirements (e.g. geographical location of the health facility, import authorizations and permits) are taken into consideration as part of this process. The timeline for screening is shorter (couple of days to a week) for standard not-complex products (e.g. refrigerators & freezers, cold boxes, vaccine carriers, 30-day loggers) but highly dependent on the country responsiveness. For non-standard and complex products (e.g. large cold rooms, remote temperature monitoring systems etc.) where more detailed information is required and product choices are thoroughly discussed with the CO and partner, the screening takes longer time.

Provided the product choice is confirmed by the country or PS partner, and all other information is available, SD will be in a position to either issue a tender for the specific procurement of equipment and/or services, or place an order by using the Long Term Arrangements (LTA's) in place.

In order to place an order with the supplier, the information available to UNICEF SD should include:

- a) Type of product requested (including plug type for on grid products)
- b) Material number(s)
- c) Quantity
- d) Expected arrival date
- e) Consignee details
- f) Customs clearance requirements (Import permits, authorizations, Green light, product certificates etc.

Order placement is enabled when the Sales Order (SO) is issued by the Country Office, or by SD in case of PS partners. SD issues the Purchase Order (PO), shares it with the supplier and the CO/PS partner simultaneously and ensures the direct communication between all parties for good coordination of specific project details. The order is closely monitored by SD from the moment it is issued until the delivery to the health facility is confirmed. If at any point the CO/PS partner become aware about an issue that might affect the delivery of the order, SD should be kept informed to inform the supplier and make the necessary arrangements in the PO. Similarly, if SD become aware about an issue that might affect timely delivery of the products, SD should communicate this to the CO/PS.

4.2 How to Use Procurement Services

Details on how to use UNICEF SD Procurement Services are clearly outlined on the public UNICEF Procurement Services website "[Procurement services resources and guidelines](#)". Ordering products requires that six key operational steps are followed, related to purchasing supplies and/or services through UNICEF Procurement Services:

- a) Planning
- b) Cost Estimate
- c) Commitment
- d) Procurement & Delivery
- e) Accounts Settled
- f) Monitoring & Evaluation

Answers to specific questions can be found on the Frequently Asked Questions page of the UNICEF Procurement Services website. SD Cold Chain Unit provides technical support and guidance for the PS requests during the screening phase prior to issuance of the Cost Estimate, however partners are recommended to reach out to SD at earlier planning stages for special projects which would entail procurement of large quantities of CC equipment, special service requirements and/or customized design requirements.

5 When to Order

5.1 Forward Planning

Procurement of Cold Chain equipment should not be an ad-hoc undertaking, but rather the outcome of a proper planning process. Equipment is either purchased to expand Cold Chain capacity, or to replace obsolete equipment. Replacement planning involves the identification of obsolete equipment that has passed its useful lifetime, either for economic or technical reasons. For the budgeting purposes, it is important not only to consider the initial purchase cost of Cold Chain equipment, but also the installation costs, the running cost, cost of spare parts, consumables, maintenance, licensing etc.

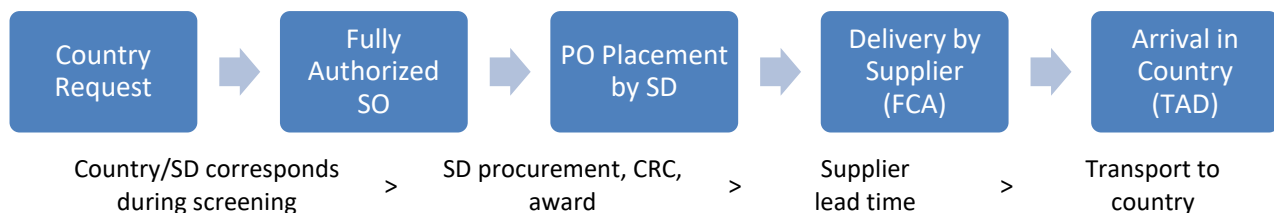
Clear and forward planning is vital also due to the limited bulk availability for some of the Cold Chain products. Supplier lead times need to be factored in, as well as transport and product installation times, if applicable. For example, for Walk-In Cold Rooms (WICs) and Walk-In Freezer Rooms (WIFs) a substantial amount of time is required for manufacturing the equipment, the sea transportation and installation works.

5.2 Delivery Lead Times

Delivery lead times consist of supplier lead time and transit time from the supplier to the country port of entry. Standard supplier lead times for Cold Chain products vary from product to product. The lead time is calculated from the supplier's receipt of the Purchase Order up to delivery of product to the port of

departure (INCOTERMS FCA²). If the delivery time of the cold chain equipment is critical, it is advisable to contact the [UNICEF SD Cold Chain Unit](#) to obtain more specific information on estimated supplier lead times.

In addition to the supplier's lead time, sufficient time needs to be added to allow for the transit time by sea to the port of destination and in-country transportation and delivery. SD has Freight Estimation Tools³ to assist in finding the estimated sea transit time and approximate shipping cost.



The total lead time from placement of the PO by UNICEF SD to the arrival of the goods at the final destination depends on multiple factors:

- Order process at country level (for Procurement Services this includes government approval procedures and transfer of funds to SD)
- Order process at UNICEF SD level
- Supplier lead time (manufacturing time, packing, palletization, pre-delivery inspection (if required), containerization, delivery of containers to port of departure)
- Transit from the port of departure (FCA) to the port of delivery (CIP)
- Clearance of goods
- In-country transport

The table below gives the estimated supplier lead times of Cold Chain products, from the time that the Purchase Order is placed by UNICEF SD to the delivery of the goods to the port of shipment (FCA date).

Table 1. Estimated Supplier Lead Times on Established LTAs

Product	Estimated Supplier Lead Time
Walk in Cold Rooms and Freezer Rooms	4 to 12 weeks
Freeze Free Vaccine carriers & Cold boxes	3 to 8 weeks
Refrigerated vehicles	From 13 weeks
Solar Direct Drive Refrigerators and Freezers	3 to 15 weeks
Ice Lined Refrigerators (ILRs)	3 to 15 weeks
Temperature Monitoring Devices (30-Day Loggers)	1 to 4 weeks
Vaccine Carriers and Cold Boxes	2 to 6 weeks
Voltage Regulators and Stabilisers	6 to 12 weeks
Remote temperature Monitoring Devices (RTMD)	4 to 12 weeks

² Supply Division place orders on FCA basis: Free Carrier with named place of delivery; the seller delivers the goods to a named airport, terminal, or other place where the carrier operates; Costs for transportation and risk of loss transfer to the buyer after delivery to the carrier.

³ Freight Estimate Tool is in UNICEF Intranet (requires login):

<https://unicef.sharepoint.com/sites/SD/SitePages/FreightEstimateCalculator.aspx>

When high quantities of products are required lead times may be longer. In such cases the option of staggered deliveries is recommended.

6 Freight Estimation

Estimated weights and volumes for Cold Chain equipment are given in the [UNICEF Supply Catalogue](#) (click on product item for detailed information).

The [Freight Estimate Tools](#)⁴ are useful for determining the most favourable mode of shipment in terms of time and cost. These tools will assist you in identifying the transit time and approximate shipping cost.

7 Estimation of Arrival Date

UNICEF SD offers tools to assist COs to assess timelines for planning. To estimate the Target Arrival Date (TAD) from the time of supply requisition (SO) placement on, use the TAD estimation tool, which includes lead times for Cold Chain products. The TAD estimation tool is helpful to identify a realistic arrival at point of unloading prior to COs raising a Sales Order with SD.

For more specific item lead time estimation particularly for critical demand contact the [Supply Division Cold Chain Unit](#), as actual availability from suppliers at a given point in time may differ from the general lead time in the tool.

Countries can monitor the progress of shipments using the respective freight forwarder's [Track & Trace](#)⁵ system.

8 Long Term Arrangements

UNICEF SD establishes Long Term Arrangements (LTAs) with product suppliers, with terms and conditions, usually for a period of 24 months, on a non-exclusive basis for the repeated purchase of specified products and services. LTAs are agreed upon, in order for UNICEF to have a degree of certainty that products will be available, and prices maintained, especially in the event of emergencies when large quantities are involved. The LTA does not bind UNICEF to purchase any minimum quantity of these items. LTAs are result of a transparent and competitive global bidding process. Prices offered by bidders remain fixed for 12 months from the start of the LTA. For the second year a percentage increase may be applied.

For the procurement of refrigerated vehicles (30cbm), UNICEF SD can place orders by piggy backing on an LTA from another UN agency. For more information please contact directly the [Supply Division Cold Chain Unit](#).

⁴ Freight Estimate Tool is in UNICEF Intranet (requires login):

<https://unicef.sharepoint.com/sites/SD/SitePages/FreightEstimateCalculator.aspx>

⁵ Track & Trace is in UNICEF Intranet (requires login)

(<https://unicef.sharepoint.com/sites/SD/SitePages/TrackandTrace.aspx>)

9 Direct Order Arrangements

Several Cold Chain items can be procured directly from the suppliers through Direct Order Arrangements (DOAs), including:

- Cold Boxes, Vaccine Carriers and Ice Packs
- 30-Day loggers, User programmable loggers and Freezer Indicators
- Voltage Regulators 1kVA

Products available on LTA, but not on DOA, include:

- ILRs and Solar Refrigerators and Freezers
- Walk-In Cold Rooms and Freezer Rooms
- Voltage Regulators 5-10kVA
- Remote Temperature Monitoring Devices
- Freeze Free Cold Boxes and Vaccine carriers
- Refrigerated trucks

Click [here](#)⁶ for Direct Order Price Lists.

10 Local Procurement Authorization

Local Procurement Authorization may be granted in exceptional bases for Cold Chain Equipment not procured by SD. This can relate to products which are not under Cold Chain Unit LTA's but in WHO/PQS listing, or equipment not having the WHO prequalification.

Countries can opt for local procurement of cold chain equipment once the products have been assessed and cleared by CCU technical and commercial teams. For further guidance please refer to [Supply Manual: the Supply Manual, Chapter 6, Section 2](#).⁷

11 Emergency Items

In case of an emergency when Cold Chain products are required, please contact the [Supply Division Cold Chain Unit](#). The Cold Chain LTAs include emergency stocks with suppliers for certain products that are available for immediate shipment.

12 Non-Standard Items

For non-standard items, UN item codes applicable for Cold Chain should be used. Refer to the [Material Master Search Tool](#)⁸ for reviewing available material numbers & material group details for Cold Chain (Refer to Purchasing Group 113 for displaying available materials being managed by UNICEF SD Cold Chain Unit).

⁶ Direct Order LTAs - Cold Chain is in the UNICEF Intranet (requires login):

<https://unicef.sharepoint.com/sites/SD/SitePages/ColdChainEquipment.aspx>

⁷ Supply Manual is in the UNICEF SharePoint (requires login): <https://unicef-9850ba148f9a52.sharepoint.com/teams/DEN/SupplyManualApp/Pages/Default.aspx>

⁸ Material Master Search Tool is in the UNICEF Intranet (requires login):

<https://unicef.sharepoint.com/sites/SD/SitePages/SL.aspx>

13 In-Country Transport

In many instances the procured products need to be transported within the country. In-country transport should be taken into consideration during the budgeting and ordering stages. The necessary local resources for transportation, manpower and time should be included in the planning process.

14 Installation and Commissioning

For certain equipment, planned installation procedures need to be in place, including a number of functionality tests to be performed on new equipment. The type of tests will depend on the nature and complexity of the equipment. This is to ensure that the equipment functions correctly and that the local users and technicians are familiar with the operation and routine maintenance of the equipment. For more details on installation and commissioning procedures, refer to the [specific guidelines for each product category](#).

15 Complaints Handling

Any potential complaint related to the equipment supplied should be addressed to UNICEF SD, thereby enabling UNICEF to handle it as an official complaint.

Handling of complaints is documented in the UNICEF SD Divisional Procedure [DP 047](#)⁹. A complaint is an expression of dissatisfaction made to SD, related to its operations, services, activities, products, or processes including the complaints handling process itself, where a response or resolution is explicitly or implicitly expected (Refer to ISO 10002:2004).

The complaint procedure seeks to systematize and ensure the proper receipt, recording, review, closing, follow up, reporting and analysis of all complaints received in Supply Division (SD) while keeping the complainant informed. Its aim is to continually improve the processes within SD and to enhance customer satisfaction.

In practice, complaints related to Cold Chain equipment supplied are addressed to UNICEF SD, thereby enabling UNICEF to handle it as an official complaint. In order to facilitate fast complaint handling, it is important the complaint contains the following information:

- a) Product concerned
- b) Purchase number
- c) Batch number if applicable
- d) Nature of complaint (as detailed and describing as possible)
- e) Photos if available

Please review Annex 1 (UNICEF SD Complaints & Claims Form).

⁹ DP047 is in the UNICEF SharePoint site (requires login): <https://unicef.sharepoint.com/teams/SD-eQMS/DL1/Forms/Division%20Procedures.aspx?web=1&viewid=9a53c049%2D5e86%2D408e%2Dbe49%2D0e7a4baea7a5>

16 Warranty


LTA agreements between UNICEF SD and suppliers stipulate the warranty conditions for Cold Chain products. Typically, the warranty period for Cold Chain products is two years, during which the supplier must repair goods whenever defects related to faulty equipment appear after delivery.

The supplier warrants to UNICEF, among others, that:

- The Goods shall be new, and factory packed and shall conform to the LTA requirements and specifications;
- The Goods are free from defects in workmanship and materials;
- The Goods are contained or packaged in a manner adequate to protect them; and
- It has the personnel, experience, qualifications, facilities, financial resources and all other skills and resources to perform its obligations under the LTA.

The Warranty Period commences after UNICEF's acceptance of a delivery made by the supplier or its authorized representative(s), and shall terminate 24 months after delivery has been made, or within such longer period of time as may be prescribed by law or by the terms of any applicable warranty required by the LTA.

Annex 1: UNICEF SD Complaints & Claims Form

UNICEF SD Complaints and Claims form 

Submitter Name: _____
 Contact Person: _____
 Tel. No: _____
 Email: _____
 Country: _____
 Date of Case: _____
 UNICEF PO no. _____

Description of the problem (**IF potential insurance claim please ensure carrier/forwarder is put on notice**): Voltage regulator is not working.

Is this a reoccurring problem? Yes No

If yes, please describe:

Product & Delivery Information:

Product Information, as applicable:		Delivery Information, as applicable:	
Product Name		Date Received	
Pack Size		Quantity Received	
Batch Number		AWB/ Bill of Lading	
Expiry Date		Name of Carrier	
Serial Number		Container number	
Supplier		Seal number	
Manufacturer		Type of transaction (PS, PGM, WH..)	
		Loading and discharging port	

Type of claim/complaint (please mark with X):

Shortage Damage Missing Delay Product quality Packaging
 Documentation issues Process

In case of damage or product/packaging quality issues please specify:

Quantity of damaged items:

Supply Value:

External damage to packaging Yes
 No

Freight Value: _____

Internal damage to goods Yes
 No

Repair, Repack costs: _____

Are the damaged supplies reparable and or salvageable?

In case of shortage, missing supplies or documentation issues:

Claim quantity:		Supply value:	
If items were missing was the seal / packaging intact?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Freight value:	
Was there any signs of tampering?	Yes <input type="checkbox"/> No <input type="checkbox"/>		

Annex 1: UNICEF SD Complaints & Claims Form

UNICEF SD Complaints and Claims form



Objective Evidence (Attach photos, notice filed against carrier/forwarder, reports, transport documents, invoice, packing list, Vaccine Arrival Report (VAR) etc. (OBS mandatory to ensure proper handling)

Other comments:	
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PSB process: confirm that for all cases of shortage/loss/damage the records in Vision has been adjusted and the items are moved to the PSB bin (099) in Vision.

Yes No if "No" please explain _____

Annex 2: Record of Revisions

Date	Description	By
April 1, 2012	First draft, by UNICEF SD\HTC\Cold Chain Unit	GK, DH, AS
August 9, 2014	Updated, additions and corrections	BR
October 28, 2014	Updated, minor corrections	BR
September 30, 2020	Broken, outdated web links have been replaced. DP047 Link is added.	SA, TC, TS
September 25, 2020	Text updated	CM
October 23, 2020	Proofreading, revisions	JK, SA