

UNICEF Target Product Profile

Multipurpose tent 24m², 48m² and 72m²

UNICEF Supply Division Innovation Unit

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Purpose of the UNICEF Target Product Profile (TPP):

UNICEF creates Target Product Profiles (TPPs) to communicate requirements for products which are currently not available on the market but which fulfil a priority need to be used in the unique context in which UNICEF and its partners operate. TPPs include information on how the new product will be used, by or for whom, and the minimum and ideal performance criteria. The purpose of TPPs is to guide industry to develop products that meet UNICEF's needs, however they do not act as the final procurement specifications but rather as a list of desired requirements that combined describes the ideal product considering the context. UNICEF recognizes that innovation is an iterative process, and that suppliers must balance sometimes competing requirements against product development progress. To allow for creativity, and the innovation process to take its course, TPPs are less prescriptive than procurement specifications, and can therefore be challenged by the industry.

For more information please visit our [TPP page](#)

Problem Statement/Need for the Product

In the context of its humanitarian response activities UNICEF makes use of multipurpose tents to support the programmatic areas of Nutrition, Health, Education, WASH and Child Protection, and its operations. Multipurpose tents are a type of emergency structure that can be rapidly deployed and made ready for use, offering fit-for-use spaces in the shortest possible timeframe. Though emergency structures are rather simple in their physicality, they are quite complex in conception as they need to respond to a great variety of requirements. Multipurpose tents are commonly mobilized through an offshore procurement process, and used when products of suitable quality and sufficient quantity are not available on the local market, in the right time and at the right cost.

Recent market screening of emergency structures and assessment of the suitability of multipurpose tents currently in use by UNICEF pointed out that there is a substantial margin for bringing multipurpose tents on par with the state-of-the-art in emergency structures and matching multipurpose tents better to actual requirements for emergency structures in the field and throughout the supply chain.

The comparison of these requirements with the current UNICEF offshore procurement offer revealed a good alignment of the current offer with some requirements in the categories supply chain, structural functionalities, cost and timeliness, and a limited alignment with other requirements in those categories, and the categories climate, hazards, durability and maintenance and post operational management. Some unmet requirements reduce the organization's capacity to reach programmatic and operational goals.

- The suitability of multipurpose tents is limited by their limited wind resistance, excessive internal heat build-up in hot climates, limited ventilation and lack of insulation in cold climates, limited durability in a variety of climates and unclear re-use and transformation options.
- Whereas the packaging of multipurpose tents currently focuses on fitting with common international transport practices, opportunities exist to better facilitate local onward transport that makes use of a variety of transport modes.

- A better definition, technical specification and user instruction for multipurpose tents that accurately and transparently reflects how multipurpose tents meet requirements would contribute to planning of programs and operations by UNICEF and its partners.

Moreover, a high degree of responsiveness is to be maintained in light of the great variance of disaster contexts and response processes in which multipurpose tents are used.

- It was recognized that a frame tent in three sizes is the most simple and versatile solution to meet all requirements. Moving from the current sizes 24m², 42m² and 72m² to the modular sizes 24m², 48m² and 72m² was considered a logical rationalization.
- Relevant alternative liners and add-ons identified are a winter liner for cold climates, inner breathable liner, a hard floor and partitions to allow for a flexible organization of the internal space of multipurpose tents, and a lighting kit with an independent power source to make use of multipurpose tents in evenings possible everywhere.

UNICEF therefore is looking for a standard multipurpose tent that optimally applies the current state-of-the-art in emergency structures, meets actual requirements in the field in a comprehensive manner and has a guaranteed performance, with the option to add a winter liner, an inner liner, a hard floor, a lighting kit and/ or a partitioning kit, depending on what is required in the specific disaster context or response process.

Programmatic relevance for UNICEF

The timeliness and quality of services UNICEF and its partners deliver to affected populations in the programmatic areas of Nutrition, Health, Education, WASH and Child Protection is related to the availability of rapid deployable and made ready for use spaces that are fit-for-purpose. For program planning purposes it is important that multipurpose tents and its add-ons have a reliable performance. Where UNICEF uses multipurpose tents to support operations rather than operations, the same applies.

Current products or response used by UNICEF

UNICEF Supply Division currently procures and supplies three sizes of multipurpose tents: 24m², 42m² and 72m², fit primarily for use in moderately hot climates and maximum wind forces of 75km/h, and for a variety of programmatic and operational uses. On a case-by-case basis, UNICEF also procures and supplies inner liners and partitions for each of the three tent sizes.

Volume and potential impact

Multipurpose tents are a standard tool of the humanitarian sector to support programs as well as operations in disaster responses throughout the world. Multipurpose tents are commonly used for the following functions: child friendly space, classroom, school staff offices, youth activities, recreation, psychosocial support, basic health, peripheral health services, nutrition, baby care, early childhood care and development, mother support, hospital/ clinic, administrative office, storage/ distribution, dispensary, warehouse, media briefing center, staff offices and staff accommodation. As tent development is effort intensive, humanitarian agencies tend to piggy-back on each other's efforts, be it by undertaking shared procurement or exchanging learnings.

Even though annual procurement volumes correlate to the scale of humanitarian emergency response requests, in the period 2011 - 2015, UNICEF procured 1.800 multipurpose tents a year (on average), half of which have been 72m² tents.

As UNICEF Supply Division currently does not doesn't systematically procure winter liners, inner liners, hard floors, lighting kits and partitioning kits, an estimate of yearly procurement quantity is not available. However, over the last years, the need for these add-ons has been increasing substantially due to changing disaster contexts and response processes. The quantity is expected to increase once items with a reliable performance become available.

Target unit cost

Please be advised that values that differ between the three tent sizes are presented as 'x / y / z', with x applicable to the 24m² tent, y to the 48m² tent and z to the 72m² tent.

It should be noted that we have considered that there may be a significant increase in comparison to the current unit cost. However, we have an expectation for significant quality improvements as outlined in this TPP with consideration to what programme budgets can be expected to allocate to emergency structures.

Target unit cost of the multipurpose tents and add-ons (all costs are FCA with named port):

	Maximum (in USD)	Ideal (in USD)
Multipurpose tent with standard liner	1200/1750/2550	950/1350/2000
Add-on 1: Winter liner	650 / 920 / 1300	300 / 400 / 600
Add-on 2: Inner liner	200 / 270 / 400	120 / 160 / 240
Add-on 3: Hard floor	1000 / 2000 / 3000	720 / 1440 / 2160
Add-on 4: Solar lighting kit	180 / 360 / 540	100 / 200 / 300
Add-on 5: Electrical lighting kit	100 / 200 / 300	50 / 100 / 150
Add-on 6: Partitioning kit	40	15

In programme budget planning, the cost of the multipurpose tent with add-ons and transport is compared with locally available alternatives, alongside considerations of suitability, cost and timeliness. These tents will be used to supplement where suitable local alternatives are not available or where the performance requirements are such that the quality standards indicated in this TPP are needed.

Use of product in UNICEF context

Use case

Tent operator: The multipurpose tent is operated by UNICEF programs, UNICEF's implementing partners that run emergency response programs in the context or Government institutions that do the same, qualified in the management, support and provision of services in Nutrition, Health, Education, WASH and Child Protection.

Tent user: The multipurpose tent is used by the tent operator and the people the tent operator provides services to, which includes all age groups, men, women and children, from all different cultural, religious and ethnic backgrounds, people suffering from illnesses or living with disabilities across all impairment groups.

The use case covers eight aspects:

1. Supply chain
2. Climate
3. Hazards
4. Functionality
5. Durability and maintenance
6. Post-operational Management
7. Cost
8. Timeliness

1. Supply Chain	
Ordering	<p>Typically multipurpose tents are ordered by UNICEF staff in programs and operations. They typically rely on UNICEF's standard offshore offer and what is pre-positioned in its warehouses or with suppliers.</p> <p>In addition, UNICEF staff at times request clarifications in relation to all aspects of the tent, and most commonly: durability in a certain climate and hazard profile, internal organisation options, cost and onward transport and set-up implications.</p> <p>In addition, UNICEF staff at times request solutions for specific challenges faced in the context they are working in, most commonly setting up the tent on rocky or sandy soil and replacing the liner while maintaining the frame.</p> <p>Ordering of add-ons may be done at the same time as ordering of the standard tent, with standard liner, but equally a few months later, as determined by the context and response process.</p>
International transport – by supplier	Multipurpose tents and add-ons are delivered by suppliers to UNICEF's international pre-positioning warehouses across the globe, or directly to UNICEF country office warehouses.
Onward international transport – by UNICEF	From international pre-positioning warehouses, multipurpose tents and add-ons are transported, by UNICEF, to country office warehouses. This is done as air-freight, sea or land transport. Common international transport practices apply.
Onward transport in operations	<p>Onward transport is managed by either UNICEF or its partners (depending on the partnership agreement).</p> <p>Multipurpose tents and add-ons received in country office's warehouses are further transported to their final destination as defined by UNICEF's program agreements. Transport modes commonly used are all sizes and types of trucks and lorries, by air, smaller size local transport means such as tricycles with flat beds, carts or tuk-tuks, carrying by hand, on large and small boats, by donkey or other beasts of burden.</p> <p>During onward transport, the tents and add-ons are handled frequently and often under less than optimal conditions. It is not uncommon for tents and liners to be transported under heavy rain, over bad roads and/or water, or under time pressure in relation to being under fire, working within a limited budget or under the urgency of bringing relief to affected populations.</p> <p>Transport is often done by local companies that have been subcontracted to perform this task.</p> <p>'Last mile' transport is often done by the future operators of the tent, and at times even users of the tent, without any professional experience in logistics.</p> <p>During onward transport, it may be that packages are to be opened up for inspection by authorities.</p> <p>Due to these onward transport conditions, packages are commonly opened up and transported further with the packages split up in parts. This requires easy identification of parts, to reduce the risk of loss or misplacement.</p>
Pre-positioning	<p>In contexts known for recurrence of emergencies, multipurpose tents and alternative liners can be pre-positioned by the operator.</p> <p>Multipurpose tents and add-ons can remain pre-positioned for up to several years, under difficult conditions (indoors and outdoors) due to climate conditions, frequent handling or absence of warehouse equipment.</p>

2. Climate	
Climate	<p>Multipurpose tents and add-ons are used in the whole of the populated world, and as such all climatic conditions under the classification STANAG2895 MMS A1-A3, B1-B2 and C0-C2 are applicable.</p> <p>Critical conditions are hot, dry and dusty – risk of excessive heat building up in the tent; hot and wet – risk of excessive heat and humidity building up in the tent, in combination with heavy rains; cold – risk of excessive heat loss from the tent and internal condensation.</p> <p>Windows and doors are used to regulate internal temperatures. They are closed or opened up depending on need. The closing flaps are commonly used to provide shading and protection for dust over the entrance and the window sections.</p> <p>For ventilation, a maximum occupation of 40 children in a 48m² tent is to be considered as reference, or a 12 adults meeting in a 24m² tent.</p>
Climate conditioning	<p>In extremely hot or cold climates, climate conditioning may be practiced. Operators place heating or cooling devices inside the tent, or outside, and use the air vents to introduce the conditioned air into the tent.</p>
Winterization	<p>For use of the multipurpose tent in cold climates, a winter liner is hung inside of the standard liner, increasing the insulation value of the tent.</p> <p>Commonly a stove fuelled with wood, coal, oil or gas is used to heat the tent. This stove is often placed inside the tent, where it has the greatest heating impact with the least energy consumption, while a secure distance from tent users and the tent liner is maintained.</p> <p>Insulating flooring mats are laid out to reduce heat loss through the floor, and increase the climate comfort of the users.</p>

3. Hazards	
Siting	<p>Multipurpose tents are set up in a variety of sites, ranging from entirely exposed to the elements to somewhat shielded by the vicinity of trees, buildings or walls.</p> <p>Multipurpose tents are set up in the entire variety of soil conditions that can be found in the populated world, with reference to ASTM-D2487.</p> <p>Site selection is done by the operator of the tent. Site preparation commonly includes removing obstacles from the site, flattening the site with a soft slope for drainage, building a drainage trench around the tent site or pouring a concrete slab to install the tent on. This is managed by the operator.</p> <p>Multipurpose tents are set up in areas with ample space available as well as in densely occupied areas with a high competition for available space.</p> <p>In some areas, sites are restricted in size to the footprint of the multipurpose tent and a minimal surrounding space for its installation.</p>
Hazards	<p>Multipurpose tents are used in the whole of the populated world, and as such all hazard conditions can be applicable.</p> <p>The multipurpose tent, regardless of which liner is used, is to remain intact under a wind load of 80km/h (ideally 120km/h) in a broad variety of soil conditions, with reference to ASTM-D2487.</p> <p>In sites where the chosen anchoring is not appropriate for the soil conditioning, the operators will refer to ballast anchoring, or installing the tent on a concrete slab.</p> <p>The multipurpose tent, regardless of which liner is used, is to remain intact, without addition of additional support elements, under a snow load of 300N/m².</p> <p>Some contexts in which multipurpose tents are used are vulnerable to fires.</p>
Violence	<p>Often multipurpose tents are used in conflict situations. Fighting parties are made aware of the humanitarian use of multipurpose tents by clearly marking them with</p>

	the UNICEF logo. In some contexts however, such marking has an adverse effect on safety, and is removed.
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4. Functionality	
Set-up	<p>Multipurpose tents and add-ons are typically set-up / installed by its operators, with possible minor support functions performed by users of the tent. In many contexts, the set-up team has not received any training.</p> <p>Operators will refer to the set-up instructions included with the tent. Therefore, the set-up instructions have to be universally understood, and the set-up and installation is to be kept simple and self-explanatory.</p> <p>In quite some contexts in which multipurpose tents are used, the operators of the tent can access internet to consult instructions on the web.</p> <p>Storing of packaging material and repair kits is done by the operators of the tent, as is labelling of the tent and storing of instructions.</p>
Function	<p>Multipurpose tents and add-ons are used as/for child friendly space, classroom, school staff offices, youth activities, recreational, psychosocial support, basic health, peripheral health services, nutrition, baby care, early childhood care and development, mother support, hospital/ clinic, administrative office, storage/ distribution, dispensary, warehouse, media briefing centre, staff offices and staff accommodation.</p> <p>Though multipurpose tents are typically ordered for a specific purpose, in emergencies, they may be redirected to other purposes.</p>
Access	<p>Most tents are frequently entered and exited. The door(s) of the tent frequently remains opened during use. When the tent is not being used, it is closed up completely.</p> <p>The entrance section of the tent, and the vestibule area in the tent with winter or inner liner, is in many contexts used to keep shoes, jackets and bags.</p>
Internal organisation	<p>When multipurpose tents and add-ons are taken into use, operators and users often collaborate to organize the internal space to make it fit-for-use. This entails installation of furniture, and may include hanging of partitions, blackboards, colouring of the inside or outside of the liner, etc.</p>
Day and night time use	<p>Multipurpose tents are mostly used during day time, but programs require more often that tents can also be used during night time.</p>
Electricity	<p>In many contexts, there is no constant power supply.</p> <p>If the context allows and the program requires it, operators of the tent bring electricity and light into the tent, taking into account the particular usage of the tent.</p>
Child friendliness	<p>Multipurpose tents are often used for classrooms. The erection of the tent is not to be done by children and all operating elements of the tent are kept away from the reach of children.</p>
Disability	<p>Multipurpose tents and add-ons are used by people living with disabilities across all impairment groups. Critical is allowing easy access for people in a wheelchair, or making use of other mobility support devices.</p>
Privacy	<p>Depending on the actual function of the multipurpose tent, a greater or lesser level of insight into the tent is desirable. Operators adjust the opening of doors and windows, and use door and window flaps to shield from insight.</p> <p>An inner liner or partitions are hung inside the tent to subdivide it when necessary.</p>
Noise	<p>Currently, few measures are taken to increase acoustic comfort inside tents, whereas it could impact positively on the quality of services delivered.</p>
Rigidizing	<p>In some contexts, for example in areas with water saturated soils, the multipurpose tent is to be fitted with a hard floor.</p>

5. Maintenance and durability	
Maintenance	<p>Regular cleaning of tents and liners is done by the operators of the tents.</p> <p>Re-tensioning of guy ropes is done by the operators of the tent.</p> <p>Most likely the operators of the tent have received no prior training in maintenance of the tent, and the need to re-tension the guy ropes is important.</p>
Durability	<p>Multipurpose tents and add-ons are typically used in the first months of a response to emergencies, after which the emergency need may reduce and/or recovery starts, or the multipurpose tents are replaced by more durable solutions. A multipurpose tent and its add-ons thus needs to keep its full functionality for at least 18 months, and preferable for 24 months to allow for lea-way in the start of recovery or replacement by more durable solutions.</p> <p>Factors that are known to impact negatively on the durability of tents are exposure to UV, exposure to humidity causing rot, dust, insufficient drainage, strong wind, snow load, inadequate set-up, maintenance and operating.</p>

6. Post-operational management	
Re-fitting, re-packing and re-using	<p>Re-use of tents and liners is currently not a common practice, but it does happen.</p> <p>Tents are in some contexts taken down and stored for the rainy season, interrupting activities and keeping the tent safe from wind and water damage.</p> <p>In other contexts, tents perform a certain function for a short while, are then packed up and moved to another location in the same operation, to perform the same or a different function.</p> <p>With the increase of quality of tents such practices are expected to increase.</p>
Transformation and re-use of pieces	<p>In most contexts, the tent, after it has fulfilled its initial role, is transformed or parts of it are re-used.</p> <p>The liner of the tent is removed and the frame fitted with a different covering, which may be an alternative textile material or local building materials such as bamboo matting or CGI sheeting, brick or other block material.</p> <p>In some contexts, it is difficult to access local materials to fit onto the frame of the tent, and a new liner is brought in.</p> <p>The individual poles and liner pieces are often re-used in other structures.</p>
Discarding	<p>In most contexts, there is little system in place to deal with tents and liners that are no longer usable. Operators of tents resort to soil burial, burning, or the tents and liners find their way to the local recycling industry that does not always operate to the highest standards for environmental safety and people's safety and health.</p>

7. Cost	
Purchase cost	<p>Emergency responses in which multipurpose tents and alternative liners are used are often large scale with limited funding. The purchase cost of the multipurpose tent and add-ons is kept as low as possible to enable reaching as large as possible portion of the affected population.</p>
Operational cost	<p>The quality of the multipurpose tent and add-ons is to be in balance with the purchase cost and the additional cost presented by international sourcing, and with its intended function and duration of use.</p> <p>The cost of climate conditioning is kept as low as possible, by reducing heat building up inside the tent in hot climates, and maximizing the insulation value of the tent through winterization.</p>

8. Timeliness	
Emergencies	Multipurpose tents and add-ons are commonly used in emergency settings, where timely delivery of services to affected populations can be life-saving. The capacity of UNICEF and its implementing partners to provide such services is dependent on the timely availability of fit-for-purpose spaces. Impacting negatively on the timely availability of multipurpose tents are mostly the mobilisation and transport process and, once tents have reached their final destination, the set-up complexity.
Beyond emergencies	Some multipurpose tents are used beyond the emergency phase and are transformed into transitional structures allowing UNICEF to move into the recovery phase. Therefore, the frame of the tent is fitted with more durable wall materials and a hard floor, sourced locally or internationally, and often also a full electrical system.

Use statement for add-ons

Add-on 1: Winter liner	The winter liner is hung inside the tent with standard liner in cold climates, to improve the internal climate comfort with the least possible energy consumption for heating.
Add-on 2: Inner liner	The inner liner is hung inside the tent with standard liner for uses that require a more intimate and soft-feel space such as psychosocial support activities or newborn care.
Add-on 3: Hard floor	The hard floor is installed in the tent when more than a plastic ground sheet is required. Examples are contexts with saturated soils and use of the tent for warehousing or for longer-term use.
Add-on 4: Solar lighting kit	The solar lighting kit provides a minimum of light and charging capacity in areas where no electrical grid or generator is available.
Add-on 5: Electrical lighting kit	The electrical lighting kit serves to quickly fit the multipurpose tent with full electric cabling and lights to run on the electrical grid or a generator.
Add-on 6: Partitioning kit	The partitioning is a very basic space separator, for example to hold two classes in parallel in one tent, or to separate an area in the tent for simple storage.

Requirements

Please find on the following pages requirements for:

1. Frame tent with standard liner	Page 14
2. Add-on 1: Winter liner	Page 23
3. Add-on 2: Inner liner	Page 29
4. Add-on 3: Hard floor kit	Page 34
5. Add-on 4: Solar lighting kit	Page 37
6. Add-on 5: Electrical lighting kit	Page 39
7. Add-on 6: Partitioning kit	Page 41

Please be advised that values that differ between the three tent sizes are presented in the below requirements as 'x / y / z', with x applicable to the 24m² tent, y to the 48m² tent and z to the 72m² tent.

1. Frame tent with standard liner

Attribute	Minimum performance	Ideal performance
Supply Chain Requirements		
<i>Weight</i>	The total weight of one tent, including packaging, is below 250kg / 400kg / 550kg	The total weight of one tent, including packaging, is below 180kg / 250kg / 380kg
<i>Volume</i>	The total packed volume of one tent, including packaging, is below 1.0m ³ / 1.4m ³ / 1.9m ³	The total packed volume of one tent, including packaging, is below 0.8m ³ / 1.0m ³ / 1.5m ³
<i>Number of tents to fit in a container</i>	The number of packed tents that can fit in respectively a 20foot and 40foot DC CTN container is 25-50 / 18-36 / 13-26	The number of packed tents that can fit in respectively a 20foot and 40foot DC CTN container is 31-62 / 25-50 / 17-33
<i>Packaging</i>	<ul style="list-style-type: none"> • The tents are packed for optimal storage and transport, in single units or combined packs below approximately 1000kg to allow for: <ul style="list-style-type: none"> ○ easy and safe handling with a forklift ○ easy and safe stacking for efficient storage ○ easy loading and unloading from a container by hand ○ making maximum use of the loading capacity of a container • Furthermore, each tent is packed in packing units below 140kg that allow for handling by hand, using handles per 20 to 30 kg that are strong, easy and comfortable to grab, resistant to frequent use and storage in wet and humid conditions. One tent comes in 2 / 3 / 4 such packing units 	
<i>Carry-on bags</i>	<p>Inside the packing units, the tent elements are further-on divided and packed into a series of carry-on bags:</p> <ul style="list-style-type: none"> • Each carry-on bag is packed with a logical combination of tent elements • Each carry-on bag weighs below 50 kg • Each carry-on bag is fitted with handles that are strong, easy and comfortable to grab, resistant to storage in wet and humid conditions, and to frequent handling 	
<i>Labelling of packing units</i>	<ul style="list-style-type: none"> • The top and sides of each packing unit are fit with a label, in a way that resists water, humidity, direct sunlight and dust, with the following information: indication of top; protect from water; UNICEF name and material number; Purchase Order Number; production date; tent size; number of packing unit (i.e. 1 of 3, 2 of 3, etc.); gross weight and cubic measurement; manufacturers' batch/ serial number; the website link to the suppliers' instructions • Of this information, the following is readable from 5m distance with 2000lux: UNICEF name and material number; tent size; number of packaging unit (i.e. 1 of 3, 2 of 3, etc.) • Each packing unit has a barcode, in accordance with barcode standard Data Matrix, height minimum 15mm, waterproof 	
<i>Labelling of carry-on bags</i>	<ul style="list-style-type: none"> • Each carry-on bag is fit with a label, in a way that resists water, humidity, direct sunlight and dust, with the following information: UNICEF name and material number; production date; tent size; number of carry-on bags (i.e. 1 of 6, 2 of 6, etc.); gross weight and cubic measurement; manufacturer's batch/ serial number 	

	<ul style="list-style-type: none"> • The carry-on bags are numbered, with the number reflecting the order in which tent elements are used in the installation of the tent • Of this information, the following is readable from 5m distance with 2000lux: UNICEF name and material number; tent size; number of carry-on bags (i.e. 1 of 6, 2 of 6, etc.) • Each carry-on bag has a barcode, in accordance with barcode standard Data Matrix, height minimum 15mm, waterproof
<i>Storage life</i>	The packed tent has a storage life of 3 years under the conditions specified in the Use Case
Product requirements	
<i>Internal surface</i>	The footprint of the tent without considering guy ropes and anchors is 6x4m / 6x8m / 6x12m, with maximized usage options inside with reference to the Use Case
<i>Site occupation</i>	The footprint of the tent with guy ropes and anchors is minimized
<i>Floor</i>	A detachable ground sheet is included that can be easily and securely attached to/in the inside of the tent and does not hamper access, taking into account the needs of people living with impaired mobility and low vision
<i>Windows</i>	<ul style="list-style-type: none"> • Each side of the tent has the following number of windows: 2 / 4 / 6, size minimum 1m wide and minimum 1.2m high. • Each window has three layers: a liner flap most exterior and a transparent flap under the liner flap that can both be opened up completely, and a mosquito/dust net that is fixed • Outer window liners can be hung onto tensioner ropes to provide shade over windows and prevent insight into tent
	<ul style="list-style-type: none"> • Each side of the tent has the following number of windows: 2 / 4 / 6, of maximum width allowable and roll-up “floor to ceiling” for as much structural performance allows • Each window has three layers: a liner flap most exterior and a transparent flap under the liner flap that can both be opened up completely, and a mosquito/dust net that is fixed • Outer window liners can be hung onto tensioner ropes to provide shade over windows and prevent insight into tent
<i>Doors</i>	<ul style="list-style-type: none"> • Each gable end has a door, size minimum 1.2m wide and 2m high • Poles and tensioning is provided with the tent to set up the door flap as a canopy over the entrance • The gable ends can also be opened up almost entirely
<i>Openings and closings</i>	<ul style="list-style-type: none"> • Windows and doors are closed, in a way that allows easy operating and withstands frequent use, in coherence with the Use Case. • Where zippers are used, they need to be two-way (opening towards left and right), and an alternative needs to be foreseen in case zippers fail • Excessive air leakage or standing water at openings and closings is avoided
<i>Ventilation grates</i>	The tent has ventilation grates as is necessary to realize the required ventilation rate. A flap of the liner material and a transparent window flap allow to close the ventilation grates
<i>Shade net</i>	The tent has a shade net as is necessary to realize the required internal climate performance. The shade net is reversible, with one side labelled with

	a UNICEF logo, and the other not. Refer to tent labelling below for guidance on the labelling requirements.	
<i>Guy ropes and tensioners</i>	Guy ropes and tensioners (if required) are clearly visible day and night, and fitted with shock absorbers	
<i>Pocket holder instructions</i>	A pocket holder to store the full set of instructions is attached to the inside of the tent liner close to one of the doors, in a way that does not cause sagging of the liner.	
<i>Air vent</i>	1 / 1 / 2 air vents of 350mm diameter are integrated in the liner, at approximately 60cm above floor level, made of the same material as the liner itself. It can be sealed off completely without compromising the waterproofing of the liner or causing excessive air leakage	
<i>Chimney patch</i>	<ul style="list-style-type: none"> • The patch is 350mm wide by 750mm high, placed away from corners at least 0.4m, and above floor at least 0.6m, in one gable end • The patch is covered on the outside with a flap from liner material that is held by Velcro and can be rolled down completely • The patch consists of a non-perforated chimney reinforcement heat resistant fabric (min 900°C) that does not unravel when cut through and is firmly hem stitched to the liner 	
<i>Cabling</i>	<ul style="list-style-type: none"> • 1 / 2 / 3 inlets for electricity cables are foreseen on each side of the tent, close to the wall ridge. They can be sealed off completely without compromising the waterproofing or causing excessive air leakage • Light and electricity cables can be easily fixed to the frame of the tent, avoiding risk of tripping 	
<i>Colors</i>	<ul style="list-style-type: none"> • The tent liner is white – Pantone 11-0601 TCX • The ground sheet is light grey – Pantone 16-4703 TCX 	
<i>Repair</i>	<ul style="list-style-type: none"> • A repair kit is included that contains: glue and/or stitching material, UV and moist resistant; guy rope and tensioners to replace 2 / 4 / 6; mosquito/dust net and transparent window to replace 2 / 3 / 4; liner material 2m² / 3m² / 4m²; replacement pieces for 10% of all strappings • The repair kit is contained in a sturdy bag that can be closed, is resistant to water, humidity and frequent handling, and is marked as repair kit. The repair kit should be able to fit in the pocket with the instructions in the tent. • Repair of liner is done by stitching, welding or gluing without significant deterioration of strength of liner or causing water or air leaking. The most appropriate method, taking in consideration the Use Case, is specified in the repair instructions and reflected in the composition of the repair kit 	
Performance requirements		
<i>Durability</i>	<p>Under the conditions specified in the Use Case:</p> <ul style="list-style-type: none"> • The tent frame has a durability of 3 years • The liner and all of its components (shade net, windows, mosquito/dust nets, ventilation grates, roof, walls, ground sheet, chimney patch, air vent, cable 	<p>Under the conditions specified in the Use Case:</p> <ul style="list-style-type: none"> • The tent frame has a durability of 5 years • The liner and all of its components (shade net, windows, mosquito/dust nets, ventilation grates, roof, walls, ground sheet, chimney patch, air vent, cable

	inlet, guy ropes and fixings) have a durability of 18 months	inlet, guy ropes and fixings) have a durability of 24 months
<i>Structural performance</i>	<ul style="list-style-type: none"> The tent is designed to resist a wind load of 80km/h, under the broadest range of conditions as specified in the Use Case The tent is designed to resist a snow load of 300N/m² 	<ul style="list-style-type: none"> The tent is designed to resist a wind load of 120km/h, under the broadest range of conditions as specified in the Use Case The tent is designed to resist a snow load of 300N/m²
<i>Internal climate performance</i>	<p>The tent reaches the following benchmark performances for the broadest possible range of contexts described under the Use Case:</p> <ul style="list-style-type: none"> internal illumination of 500 lux ventilation rate of 5l/s per person 21 °C internal temperature <p>In addition, noise caused by buffeting under wind is minimized</p>	
User requirements		
<i>Set-up team</i>	The tent can be erected by an untrained team of 3 / 5 / 7	
<i>Set-up time</i>	The tent can be erected, with an untrained team, within a time span of 120min / 140min / 160min	The tent can be erected, with an untrained team, within a time span of 90min / 100min / 110min
<i>Set-up tools</i>	All the tools necessary to set up the tent are included, are high quality, intuitive and generic, kept in a waterproof sturdy wrapping allowing for frequent handling and marked for its content	The only tool needed to set up the tent is a tool to anchor the tent. It is kept in a waterproof sturdy wrapping allowing for frequent handling and marked for its content
<i>Set-up complexity</i>	<ul style="list-style-type: none"> All elements that make up the tent are coded in accordance with the graphic content list and step-by-step instructions The number of small, loose elements that make up the tent is limited 	<ul style="list-style-type: none"> All elements that make up the tent are coded in accordance with the graphic content list and step-by-step instructions There are no small, loose elements
<i>Storing of carry-on bags, tools and repair kit</i>	The carry-on bags, the tools and repair kits are easily packed into those bags that are most suited to store them in, and are marked for such purpose	
<i>Labelling of tent</i>	<ul style="list-style-type: none"> The tent is labelled on the front and back gables, with the UNICEF logo, minimum height of 30cm, Pantone 17-4540-TC logo on Pantone 11-0601 TCX, center approximately 1.5m above floor, using loose labels that are attached with Velcro One side of the reversible shade net has 2 UNICEF logos, one on each roof slope, minimum height 1.2m, Pantone 17-4540-TC logo on Pantone 11-0601 TCX On each roof sloop on the standard liner there is 1 UNICEF logo, minimum height 1.2m, Pantone 17-4540-TC logo on Pantone 11-0601 TCX Below the UNICEF labelling, on both gables, an empty label is foreseen, minimum height 50cm, Pantone 11-0601 TCX, a loose label attached with Velcro, to allow for spray-on of other logos or information 	

	<ul style="list-style-type: none"> The manufacturer's batch traceability label is fixed to the liner, on the inside, close to one of the doors
<i>Use and operating</i>	All elements of the tent are low-tech and easy to use, with reference to the types of use and users described under the Use Case: self-explanatory, withstanding frequent use, not compromising the structural or internal climate performance of the tent, taking into account the specific needs of people with mobility impairments and low vision
<i>Cleaning maintenance and repair</i>	<ul style="list-style-type: none"> The frame tent with the standard liner should be able to tolerate chemical and procedure disinfection listed under CDC guidance and must not endanger children or adults using the tent afterwards, or affect the performance or durability of the tent. Standard used chemicals include chlorine, sodium hypochlorite, formaldehyde and ethanol (consult the reference list for further information) The tent is easy to clean and maintain, both inside and out Repair is self-explanatory and low-tech
Information requirements	
<i>Instructions</i>	<ul style="list-style-type: none"> Each packing unit includes a laminated waterproof copy of instructions, contained within 1 waterproof holder that can withstand frequent handling, and is marked for its content All instructions can be consulted on the supplier's website. The link to the supplier's instructions is printed waterproof on the holder, letter height minimum 2cm Instructions are made up primarily out of drawings describing pertinent points step-by-step, and are A4 size Main operating instructions, in drawings, are printed on the inside of the tent, on one of the gable ends Text in instructions is in English, French and Arabic A content list of the tent elements is included
<i>Safe siting and site preparation instructions</i>	<p>Safe siting and site preparation instructions include:</p> <ul style="list-style-type: none"> Minimum surface required to set up the tent, including its anchoring and tensioning to be sited on stable, gently sloping site, distant from unstable slopes to be sited distant from fire sources organize drainage of the site, around the tent types of soils the included anchoring is suitable for alternative anchoring options how to set up the tent on a concrete flooring orient doors away from prevailing wind Link to safe siting and site preparation instructions on supplier's website
<i>Set-up instructions</i>	<p>Set-up instructions include:</p> <ul style="list-style-type: none"> graphic content list, indication of number of pieces for each element Step-by-step graphic set-up instruction Link to instructional set-up video on supplier's website in English, French and Arabic
<i>Cleaning, maintenance, operating and repair instructions</i>	<p>Maintenance, operating and repair instructions include:</p> <ul style="list-style-type: none"> Opening and closing of windows and doors Cleaning of the dust net

	<ul style="list-style-type: none"> • Re-tensioning of guy ropes • Use of the repair kit • Link to cleaning, maintenance, operating and repair instructions on supplier's website 	
<i>Internal organization instructions</i>	<p>Internal organization instructions include:</p> <ul style="list-style-type: none"> • schemes of how the internal space can be organized as a nursery, classroom, counseling room, office space, a living quarter and a warehouse • placement of a stove: close to the gable end with the chimney patch, sufficiently distant from the tent liner in all directions, on a protective heat resistant and inflammable floor • Link to internal organization instructions on supplier's website 	
<i>Re-packing instructions</i>	<p>Re-packing instructions include:</p> <ul style="list-style-type: none"> • graphic content list, indication of number of pieces for each element • Step-by-step graphic re-packing instructions • Link to re-packing instructions on supplier's website 	
<i>Safe disposal instructions</i>	<p>Safe disposal instructions include:</p> <ul style="list-style-type: none"> • Low-tech and low-cost options for safe disposal options • Safety precautions and equipment required for safe disposal • Link to safe disposal instructions on supplier's website 	
Commercialization requirements		
<i>Documentation of compliance</i>	<p>The tent comes with the expectation of documentation of compliance to all of the above requirements. In particular the expectation is that testing results and certification to standards commonly used in the sector is included for:</p> <ul style="list-style-type: none"> • Wind performance • Internal climate and ventilation performance in different context conditions as per the use case • Performance of liner material, including seams: <ul style="list-style-type: none"> ○ Tensile strength ○ Tensile strength after exposure to UV and moist ○ Tear resistance ○ Composition ○ Specific weight ○ Water and rain penetration resistance ○ Flame behavior ○ Rot proofing <p>Variations are documented by the supplier and shared with UNICEF.</p>	
<i>Children's Rights and Business Principles</i>	Adherence to UNICEF's Children's Rights and Business Principles	
<i>Environmental management</i>	Proposed timelines for ISO14001 certification	ISO 14001:2015 certified
<i>Quality management</i>	Proposed timelines for ISO9001 certification	ISO 9001:2015 certified

1. Add-on 1: Winter liner

Attribute	Minimum performance	Ideal performance
Supply Chain requirements		

<i>Weight</i>	The total weight of the winter liner, including packaging, is below 120kg / 220kg / 340kg	The total weight of the winter liner, including packaging, is below 60kg / 100kg / 160kg
<i>Volume</i>	The total volume of the winter liner, including packaging, is below 1.0m ³ / 1.4m ³ / 1.9m ³	The total volume of the winter liner, including packaging, is below 0.5m ³ / 0.7m ³ / 1m ³
<i>Number of winter liners to fit in a container</i>	The number of packed liners that can fit in respectively a 20foot and 40foot DC CTN container is 25-50 / 18-36 / 13-26	The number of packed liners that can fit in respectively a 20foot and 40foot DC CTN container is 50-100 / 36-71 / 25-50
<i>Packaging</i>	<ul style="list-style-type: none"> • The liners are packed for optimal storage and transport, in single units or combined packs below approximately 1000kg to allow for: <ul style="list-style-type: none"> ○ easy and safe handling with a forklift ○ easy and safe stacking for efficient storage ○ easy loading and unloading from a container by hand ○ making maximum use of the loading capacity of a container • Furthermore, each liner is packed in packing units below 140kg that allow for handling by hand, using handles per 20 to 30 kg that are strong, easy and comfortable to grab, resistant to frequent use and storage in wet and humid conditions. 	
<i>Labelling of packing units</i>	<ul style="list-style-type: none"> • The top and sides of the packing units are fitted with a label, in a way that resists water, humidity and direct sunlight, containing the following information: indication of top (only for packaging unit); protect from water; UNICEF name and material number; Purchase Order Number; production date; liner type and size; gross weight and cubic measurement; manufacturer's batch/ serial number; the website link to the supplier's instructions • Of this information, the following is readable from 5m distance with 2000lux: UNICEF name and material number; liner type and size • The packing unit has a barcode, in accordance with barcode standard Data Matrix, height minimum 15mm, waterproof 	
<i>Storage life</i>	The packed winter liner has a storage life of 3 years under the conditions as set out under the Use Case	
Product requirements		
<i>Internal surface</i>	The internal surface of the winter liner is 21m ² / 42m ² / 60m ² , leaving a vestibule area near one of the two doors of 3m ² / 6m ² / 12m ²	
<i>Vestibule location</i>	The vestibule is placed on the gable end without chimney patch	
<i>Internal height</i>	The liner fits in the tent with standard liner without overly reducing its internal height yet optimizing its insulation performance	
<i>Suspension system</i>	The winter liner is hung on the frame of the tent and along the wall ridges, using a suspension system that is durable, self-explanatory and easy to use, and ensures that the winter liner does not sag. Interoperability amongst tent and liner solutions from various suppliers which can easily fit a range of frame designs and diameters is a key objective of this exercise.	
<i>Floor</i>	The winter liner has an integrated floor that allows for easy access and exit, taking into account the needs of people living with impaired mobility and low vision	

<i>Floor matting</i>	<ul style="list-style-type: none"> • Floor matting is included to protect from the cold. It is made up of pieces interconnected with overlap, covering the entire floor surface inside of the winter liner • Full floor matting is 100% fire-proof • Risk of tripping over or slipping on floor matting is minimized, taking into account the needs of people living with impaired mobility and low vision 	
<i>Windows</i>	<ul style="list-style-type: none"> • The winter liner has the same number, sizes and placement of windows as the standard liner • Each window has two layers: a transparent window flap and a closing flap that can also be rolled up just partially, in the same material as the liner. Also the transparent window flap can be opened up. 	
<i>Doors</i>	The winter liner has 2 doors, aligned with the doors of the standard liner, at each gable end, 1.2m wide and 2m high, that can be closed with a flap of the winter liner material	
<i>Openings and closings</i>	<ul style="list-style-type: none"> • Windows and doors are closed, in a way that allows easy operating and withstands frequent use, in coherence with the Use Case. • Where zippers are used, they need to be two-way (opening towards left and right), and an alternative needs to be foreseen in case zippers fail • Excessive air leakage or standing water at openings and closings is avoided 	
<i>Heat recuperation</i>	None	A low-tech heat recuperation system is included
<i>Ventilation grates</i>	The tent has ventilation grates as is necessary to realize the required ventilation rate. A flap of the liner material and a transparent flap allow to close the ventilation grates	
<i>Pocket holder</i>	A pocket holder to store the full set of instructions is attached to the inside of the tent liner close to one of the doors, in a way that does not cause sagging of the liner. The pocket holder is marked for its content	
<i>Air vent</i>	1 / 1 / 2 air vents 350mm diameter are integrated in the liner, aligned with the air vents in the standard liner. It can be sealed off completely without causing excessive air leakage	
<i>Chimney patch</i>	<ul style="list-style-type: none"> • The patch is 350mm wide by 750mm high, aligned with the chimney patch of the standard liner • The patch is covered on the outside with a flap that is held by Velcro and can be rolled down completely • The patch consists of a non-perforated chimney reinforcement heat resistant fabric (min 900°C) that does not unravel when cut through and is firmly hem stitched to the liner 	
<i>Chimney sleeve</i>	<ul style="list-style-type: none"> • The chimney sleeve is a pyramid shape with base 350 by 700mm that fits on the Velcro installed for the chimney patch. The height of the pyramid is 400mm, with a hole of 150mm diameter at the top. • The chimney sleeve forms a draught and water barrier around the chimney pipe, is 100% fire-proof, tear-proof and waterproof. • The lacing string is fire-proof, with a tensile strength allowing a strong attachment around the pipe 	
<i>Floor protection stove</i>	<ul style="list-style-type: none"> • The floor protection measures 0.5 by 1 m, is of minimum 4mm thick fibrocement plates 	

	<ul style="list-style-type: none"> The floor protection is 100% fire-proof and rigid, non-toxic and free from asbestos 	
<i>Reflective wall patch</i>	A reflective wall patch is included that can be attached to the inside of the winter liner, behind the stove, to protect the winter liner from the heat of the stove and reflect the heat of the stove back into the tent	
<i>Inlets for cables</i>	1 / 2 / 3 inlets for electricity cables on each side of the tent, aligned with the inlets of the standard liner. They can be sealed off completely without causing excessive air leakage	
<i>Color</i>	<ul style="list-style-type: none"> The tent liner is white: Pantone 11-0601 TCX The ground sheet is light grey: 14-4105 TCX 	
<i>Repair</i>	<ul style="list-style-type: none"> A repair kit is included that contains: glue and/or stitching material, moist resistant; transparent window material to replace 2 / 3 / 4; liner material 2m² / 3m² / 4m²; replacement pieces for 10% of all strappings The repair kit is contained in a sturdy bag that can be closed, is resistant to water, humidity and frequent handling, and is marked as repair kit Repair of liner is done by stitching, welding or gluing without significant deterioration of strength of liner or causing water or air leaking. The most appropriate method, taking in consideration the Use Case, is specified in the repair instructions and reflected in the composition of the repair kit 	
Performance requirements		
<i>Durability</i>	The winter liner and all of its components has a durability of 18 months under the conditions set out in the Use Case	The winter liner and all of its components has a durability of 24 months under the conditions set out in the Use Case
<i>Structural performance</i>	The tent with winter liner has the same structural performance as the tent with only the standard liner	
<i>Internal climate performance</i>	<p>The tent with floor matting reaches the following benchmark performances for the broadest possible range of contexts described under the Use Case:</p> <ul style="list-style-type: none"> internal illumination of 500 lux ventilation rate of 5l/s per person 18°C internal temperature <p>The winter liner has a noise reductive capacity</p>	
User requirements		
<i>Installation team</i>	The winter liner can be installed with a team of 2 untrained persons	
<i>Installation time</i>	The winter liner can be installed within 20 minutes with an untrained team	
<i>Installation complexity</i>	The installation does not require tools, is easy and self-explanatory	
<i>Cleaning, maintenance, repair and operating</i>	<ul style="list-style-type: none"> The winter liner should be able to tolerate chemical and procedure disinfection listed under CDC guidance and must not endanger children or adults using the tent afterwards, or affect the performance or durability of the tent. Standard used chemicals include chlorine, sodium hypochlorite, formaldehyde and ethanol (consult the reference list for further information) All elements of the liner are self-explanatory and easy to operate with reference to the types of use and users specified under the Use Case: self-explanatory, withstanding frequent use, not compromising the structural or internal climate performance of the tent, taking into account the specific needs of people with mobility impairments and low vision Repairing the tent is easy, low-tech and self-explanatory 	

Information requirements	
<i>Instructions</i>	<ul style="list-style-type: none"> • The packing unit includes a laminated waterproof copy of repair, re-packing, stove installation, safe heating and safe disposal instructions • Instructions are made up primarily out of drawings describing pertinent points step-by-step and are A4 size • Text in instructions is in English, French and Arabic • All instructions can be consulted on the supplier's website. The link to the supplier's instructions is included
<i>Stove installation and safe heating instructions</i>	<p>Stove installation and safe heating instructions include:</p> <ul style="list-style-type: none"> • Siting of heating device away from the wall • Placement of stove floor protection under stove • Attachment of the heat reflective wall patch • Installation chimney through heat resistant fabric, not perforating liner • Chimneys have caps to prevent sparks from falling back on the tent • Evacuation in case of fire • Link to instructional safe heating instructions video on supplier's website
<i>Re-packing instructions</i>	<p>Re-packing instructions include:</p> <ul style="list-style-type: none"> • graphic content list, with indication of number of pieces for each element • Step-by-step graphic re-packing instructions • Link to re-packing instructions on supplier's website
<i>Safe disposal instructions</i>	<p>Safe disposal instructions include:</p> <ul style="list-style-type: none"> • Low-tech and low-cost options for safe disposal options • Safety precautions and equipment required for safe disposal • Link to safe disposal instructions on supplier's website
Commercialization requirements	
<i>Documentation of compliance</i>	<p>The tent with winter liner comes with the expectation of documentation of compliance to all of the above requirements. In particular the expectation is that testing results and certification to standards commonly used in the sector is included for:</p> <ul style="list-style-type: none"> • Wind performance - preferable by means of wind tunnel testing • Internal climate and ventilation performance in different context conditions • Performance of liner material, including seams: <ul style="list-style-type: none"> ○ Tensile strength ○ Tensile strength after exposure to UV and moist ○ Tear resistance ○ Composition ○ Specific weight ○ Breathability ○ Flame behavior ○ Rot proofing <p>Variations are documented</p>
<i>Children's Rights and Business Principles</i>	Adherence to UNICEF's Children's Rights and Business Principles
<i>Environmental management</i>	ISO 14001:2015 certified
<i>Quality management</i>	ISO 9001:2015 certified

2. Add-on 2: Inner liner

Attribute	Minimum performance	Ideal performance
Supply Chain requirements		
<i>Weight</i>	The total weight of the inner liner, including packaging, is below 44kg / 80kg / 124kg	The total weight of the inner liner, including packaging, is below 22kg / 40kg / 62kg
<i>Volume</i>	The total volume of the inner liner, including packaging, is below 0.22m ³ / 0.4m ³ / 0.66m ³	The total volume of the inner liner, including packaging, is below 0.11m ³ / 0.2m ³ / 0.33m ³
<i>Number of winter liners to fit in a container</i>	The number of packed liners that fit in respectively a 20foot and 40foot DC CTN container is 113 – 227 / 62 – 125 / 38 - 76	The number of packed liners that fit in respectively a 20foot and 40foot DC CTN container is 227 – 455 / 125 – 250 / 76 - 152
<i>Packaging</i>	<ul style="list-style-type: none"> The liners are packed for optimal storage and transport, in single units or combined packs below approximately 1000kg to allow for: <ul style="list-style-type: none"> easy and safe handling with a forklift easy and safe stacking for efficient storage easy loading and unloading from a container by hand making maximum use of the loading capacity of a container Furthermore, each liner is packed in packing units below 140kg that allow for handling by hand, using handles per 20 to 30 kg that are strong, easy and comfortable to grab, resistant to frequent use and storage in wet and humid conditions. 	
<i>Labelling of packing unit</i>	<ul style="list-style-type: none"> The top and sides of the packing units are fitted with a label, in a way that resists water, humidity and direct sunlight, containing the following information: indication of top (only for box); protect from water; UNICEF name and material number; Purchase Order Number; production date; liner type and size; gross weight and cubic measurement; manufacturer's batch/ serial number; the link to the supplier's instructions Of this information, the following is readable from 5m distance with 2000lux: UNICEF name and material number; liner type and size The packing units have a barcode, in accordance with barcode standard Data Matrix, height minimum 15mm, waterproof 	
<i>Storage life</i>	The packed inner liner has a storage life of 3 years under the conditions as set out under the Use Case	
Product requirements		
<i>Internal surface</i>	The internal surface of the inner liner is 21m ² / 42m ² / 60m ² , leaving a vestibule area near one of the two doors of 3m ² / 6m ² / 12m ²	
<i>Vestibule location</i>	The vestibule is placed on the gable end without chimney patch	
<i>Internal height</i>	The inner liner fits in the tent with standard liner without overly reducing its internal height	
<i>Suspension system</i>	The inner liner is hung on the frame of the tent and along the wall ridges, using a suspension system that is durable, self-explanatory and easy to use, and ensures that the winter liner does not sag. Interoperability amongst tent and liner solutions from various suppliers which can easily fit a range of frame designs and diameters is a key objective of this exercise.	
<i>Floor</i>	The inner liner has an integrated floor that allows for easy access and exit, taking into account the needs of people living with impaired mobility and low vision	

<i>Walls</i>	The inner liner is breathable, translucent, has a soft feel and no windows	
<i>Doors</i>	The inner liner has 2 doors, aligned with the doors of the standard liner, 1.2m wide and 2m high, closed with a flap of the liner material	
<i>Openings and closings</i>	<ul style="list-style-type: none"> • Windows and doors are closed, in a way that allows easy operating and withstands frequent use, in coherence with the Use Case. • Where zippers are used, they need to be two-way (opening towards left and right), and an alternative needs to be foreseen in case zippers fail • Excessive air leakage or standing water at openings and closings is avoided 	
<i>Ventilation grates</i>	The tent has ventilation grates as is necessary to realize the required ventilation rate. A flap of the liner material and a transparent flap allow to close the ventilation grates	
<i>Pocket holder</i>	A pocket holder to store the full set of instructions is attached to the inside of the liner close to one of the doors, in a way that does not cause sagging of the liner. The pocket holder is marked for its content	
<i>Air vent</i>	1 / 1 / 2 air vents 350mm diameter are integrated in the liner, aligned with the air vents in the standard liner. It can be sealed off completely without causing excessive air leakage	
<i>Inlet for cables</i>	1 / 2 / 3 inlets for electricity cables are foreseen on each side, aligned with the inlets of the standard liner. They can be sealed off completely without causing excessive air leakage	
<i>Color</i>	<ul style="list-style-type: none"> • The liner is soft white – Pantone 11-0608 TCX • The ground sheet is light grey – Pantone 14-4105 TCX 	
<i>Repair</i>	<ul style="list-style-type: none"> • A repair kit is included that contains glue and/or stitching material, moist resistant; liner material 2m² / 3m² / 4m²; replacement pieces for 10% of all strappings • The repair kit is contained in a sturdy bag that can be closed, is resistant to water, humidity and frequent handling, and is marked as repair kit • Repair of liner is done by stitching, welding or gluing without significant deterioration of strength of liner or causing water or air leaking. The most appropriate method, taking in consideration the Use Case, is specified in the repair instructions and reflected in the composition of the repair kit 	
Performance requirements		
<i>Durability</i>	The liner and all of its components has a durability of 18 months under the conditions set out in the Use Case	The liner and all of its components has a durability of 24 months under the conditions set out in the Use Case
<i>Structural performance</i>	The tent with inner liner has the same structural performance as the tent with only the standard liner	
<i>Internal climate performance</i>	<p>The tent with inner liner reaches the following benchmark performances for the broadest possible range of contexts described under the Use Case:</p> <ul style="list-style-type: none"> • internal illumination of 500 lux • ventilation rate of 5l/s per person • 21°C internal temperature <p>The inner liner has a noise reductive capacity</p>	
User requirements		
<i>Installation team</i>	The inner liner can be installed with a team of 2 untrained persons	
<i>Installation time</i>	The inner liner can be installed within 20 minutes with an untrained team	
<i>Complexity</i>	The installation does not require tools, is easy and self-explanatory	

<i>Cleaning, maintenance, repair and operating</i>	<ul style="list-style-type: none"> • The inner liner should be able to tolerate chemical and procedure disinfection listed under CDC guidance and must not endanger children or adults using the tent afterwards, or affect the performance or durability of the tent. Standard used chemicals include chlorine, sodium hypochlorite, formaldehyde and ethanol (consult the reference list for further information) • All elements of the liner are self-explanatory and easy to operate with reference to the types of use and users specified under the Use Case: self-explanatory, withstanding frequent use, not compromising the structural or internal climate performance of the tent, taking into account the specific needs of people with mobility impairments and low vision • Repairing the tent is easy, low-tech and self-explanatory 		
Information requirements			
<i>Instructions</i>	<ul style="list-style-type: none"> • The packing unit includes a laminated waterproof copy of instructions • Instructions are made up primarily out of drawings describing pertinent points step-by-step, and is A4 size • Text in instructions is in English, French and Arabic • All instructions can be consulted on the supplier's website. The website link to the supplier's instructions is included 		
<i>Re-packing instructions</i>	<p>Re-packing instructions include:</p> <ul style="list-style-type: none"> • graphic content list, indication of number of pieces for each element • step-by-step graphic re-packing instructions • link to re-packing instructions on supplier's website 		
<i>Safe disposal instructions</i>	<p>Safe disposal instructions include:</p> <ul style="list-style-type: none"> • low-tech and low-cost options for safe disposal options • safety precautions and equipment required for safe disposal • link to safe disposal instructions on supplier's website 		
Commercialization requirements			
<i>Documentation of compliance</i>	<p>The tent with inner liner comes with the expectation of documentation of compliance to all of the above requirements. In particular the expectation is that testing results and certification to standards commonly used in the sector is included for:</p> <ul style="list-style-type: none"> • internal climate and ventilation performance in different context conditions • performance of liner material, including seams: <ul style="list-style-type: none"> ○ tensile strength ○ tensile strength after exposure to UV and moist ○ tear resistance ○ composition ○ specific weight ○ breathability ○ flame behavior ○ rot proofing <p>Variations are documented and provided to UNICEF.</p>		
<i>Children's Rights and Business Principles</i>	Adherence to UNICEF's Children's Rights and Business Principles		
<i>Environmental management</i>	<table border="1"> <tr> <td>Proposed timelines for ISO14001 certification</td> <td>ISO 14001:2015 certified</td> </tr> </table>	Proposed timelines for ISO14001 certification	ISO 14001:2015 certified
Proposed timelines for ISO14001 certification	ISO 14001:2015 certified		

Quality management	Proposed timelines for ISO9001 certification	ISO 9001:2015 certified
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3. Add-on 3: Hard floor kit

Attribute	Minimum performance	Ideal performance
Supply Chain requirements		
<i>Weight</i>	The total weight of the hard floor kit, including packaging, is below 260kg / 520kg / 780kg	The total weight of the hard floor kit, including packaging, is below 180kg / 360kg / 540kg
<i>Volume</i>	The total volume of the hard floor kit, including packaging, is below 2.4m ³ / 4.8m ³ / 7.2m ³	The total volume of the hard floor kit, including packaging, is below 1.6 m ³ / 3.2m ³ / 4.8m ³
<i>Number to fit in a container</i>	The number of kits that can fit in respectively a 20foot and 40foot DC CTN container is 10-21 / 5-10 / 3-7	The number of kits that can fit in respectively a 20foot and 40foot DC CTN container is 16-31 / 8-16 / 5-10
<i>Packaging</i>	<p>The hard floor kit is packed for optimal storage and transport, in single units or combined packs below approximately 1000kg to allow for:</p> <ul style="list-style-type: none"> ○ easy and safe handling with a forklift ○ easy and safe stacking for efficient storage ○ easy loading and unloading from a container by hand ○ making maximum use of the loading capacity of a container <p>Furthermore, each liner is packed in packing units below 140kg that allow for handling by hand, using handles per 20 to 30 kg that are strong, easy and comfortable to grab, resistant to frequent use and storage in wet and humid conditions.</p>	
<i>Labelling</i>	<ul style="list-style-type: none"> • The top and sides of the packing units are fit with a label, in a way that resists water, humidity and direct sunlight, containing the following information: indication of top; protect from water; UNICEF name and material number; Purchase Order Number; production date; set type and size; number of packages (i.e. 1 of 3, 2 of 3, etc.); gross weight and cubic measurement; manufacturer's batch/ serial number; the link to the supplier's instructions • Of this information, the following is readable from 5m distance with 2000lux: UNICEF name and material number; set type and size; number of packing unit (i.e. 1 of 3, 2 of 3, etc.) • Each package has a barcode, in accordance with barcode standard Data Matrix, height minimum 15mm, waterproof 	
<i>Storage life</i>	The packed hard floor kit has a storage life of 3 years under the conditions set out under the Use Case	
Product requirements		
<i>Floor in tent</i>	The hard floor covers the entire internal surface of the multipurpose tent	
<i>Anti-trip marking</i>	The front ends of the hard floor, towards both doors of the tent, are marked with a bright color, that resists frequent walking over, to prevent tripping	
<i>Colors</i>	The hard floor is grey – Pantone 16-4703 TCX	
Performance requirements		
<i>Durability</i>	The hard floor has a durability of 3 years with reference to the Use Case	
<i>Fire behavior</i>	The floor is permanently flame retardant	

<i>Internal climate performance</i>	The floor is designed to contribute to internal acoustic and climate comfort	
User requirements		
<i>Set-up team</i>	The floor can be installed by an untrained team of 2	
<i>Set-up time</i>	The floor can be installed, with an untrained team, within a time span of 120min / 180min / 240min	The floor can be installed, with an untrained team, within a time span of 60min / 90min / 120min
<i>Set-up tools</i>	All the tools necessary to install the floor are included, are qualitative and generic, kept in a waterproof sturdy wrapping allowing for frequent handling and marked for its content	
<i>Set-up complexity</i>	<ul style="list-style-type: none"> • All elements are coded in accordance with the graphic content list and step-by-step instructions • The number of small, loose elements is limited 	
<i>Floor finishing</i>	The top surface of the floor is finished and detailed to avoid tripping and slipping, also when wet. The floor is designed taking into account the needs of people living with impaired mobility and low vision	
<i>Cleaning and maintenance</i>	<ul style="list-style-type: none"> • The hard floor should be able to tolerate chemical and procedure disinfection listed under CDC guidance and must not endanger children or adults using the tent afterwards, or affect the performance or durability of the tent. Standard used chemicals include chlorine, sodium hypochlorite, formaldehyde and ethanol (consult the reference list for further information) • The floor is easy to clean with common products, and requires no further maintenance 	
Information requirements		
<i>Instructions</i>	<ul style="list-style-type: none"> • The kit comes with a laminated waterproof copy of instructions, contained within 1 waterproof holder that can withstand frequent handling, and is marked for its content • Instructions are made up primarily out of drawings describing pertinent points step-by-step, and are A4 size • Text in instructions is in English, French and Arabic • All instructions can be consulted on the supplier's website. The link to the supplier's instructions is printed waterproof on the holder, letter height minimum 2cm 	
<i>Set-up instructions</i>	Set-up instructions include: <ul style="list-style-type: none"> • graphic content list, indication of number of pieces for each element • Step-by-step graphic set-up instructions • Link to instructional set-up video on supplier's website 	
<i>Safe disposal instructions</i>	Safe disposal instructions include: <ul style="list-style-type: none"> • Low-tech and low-cost options for safe disposal • Safety precautions and equipment required for safe disposal • Link to safe disposal instructions on supplier's website 	
Commercialization requirements		
<i>Documentation of compliance</i>	The kit comes with the expectation of documentation of compliance to all of the above requirements. In particular the expectation is that testing results and certification to standards commonly used in the sector is included for insulation capacity, acoustic behavior, slip resistance, wear and tear under use and exposure to water and humidity, fire resistance	

<i>Children's Rights and Business Principles</i>	Adherence to UNICEF's Children's Rights and Business Principles	
<i>Environmental management</i>		ISO 14001:2015 certified
<i>Quality management</i>		ISO 9001:2015 certified

4. Add-on 4: Solar lighting kit

Attribute	Minimum performance	Ideal performance
Supply Chain requirements		
<i>Weight and volume</i>	The lighting kit is designed to have minimum packed weight and volume	
<i>Packaging</i>	The lighting kit is packed to achieve minimum volume and weight, easy handling with limited risk of damages during transport, allows for re-packing, is eco-friendly and marked for easy identification, safe storage in wet and humid conditions of 5 years without compromising content	
<i>Storage life</i>	The packed lighting kit has a storage life of 5 years under the conditions as set out under the Use Case. The battery has a storage life of 3 years.	
Product requirements		
<i>Power generation</i>	The lighting kit comes with solar paneling that can be safely and securely fixed to the tent, and taken off	
<i>Lighting points</i>	<ul style="list-style-type: none"> • The number of lighting points included internally in the tent is 2 / 4 / 6 • One additional lighting point is included for lighting the entrance of the tent externally 	
<i>Charging stations</i>	<ul style="list-style-type: none"> • The kit comes with 2 USB mobile phone charging stations 	
Performance requirements		
<i>Durability and maintenance</i>	The lighting kit is designed to be operational in the conditions defined under the Use Case, to withstand frequent handling and not requiring any maintenance, repair or replacement for 18 months	The lighting kit is designed to be operational in the conditions defined under the Use Case, to withstand frequent handling and not requiring any maintenance, repair or replacement for 24 months
<i>Power</i>	<p>The power produced allows to simultaneously and for 4 hours minimum:</p> <ul style="list-style-type: none"> • Operate 2 / 4 / 6 approx. 700 lumen lights inside • operate a 150 lumen light outside • charging of 1 mobile phone <p>The kit has a power save option that can be operated by the user</p>	<p>The power produced allows to simultaneously and for 8 hours minimum:</p> <ul style="list-style-type: none"> • Operate 2 / 4 / 6 approx. 900 lumen lights inside • operate a 300 lumen light outside • simultaneous charging of 2 mobile phones <p>The kit has a power save option that can be operated by the user</p>
User requirements		
<i>Ease and safety of use</i>	<ul style="list-style-type: none"> • The kit and all of its elements are low-tech in use • Switches and sockets are placed for ease of use, taking into account the needs of people living with mobility impairments and low vision 	

	<ul style="list-style-type: none"> • Cables are safely and securely attached to the structure in a way that reduces the risk of tripping
Information requirements	
<i>Instructions</i>	<ul style="list-style-type: none"> • The package includes a laminated waterproof copy of use and safe disposal instructions • Instructions are made up primarily out of drawings describing pertinent points step-by-step • Instructions are A4 size • Text in instructions is in English, French and Arabic • All instructions can be consulted on the supplier's website. The link to the supplier's instructions is included
<i>Use instructions</i>	Use instructions address the installation of the power generation, the lighting points and the charging stations
<i>Safe disposal instructions</i>	Safe disposal instructions address how the lighting kit can be discarded with the least risk to the environment and the health and safety of people, considering that local recycling practices may not be up to the highest standards
Commercialization requirements	
<i>Documentation of compliance</i>	The lighting kit comes with documentation of compliance to all of the above requirements, including testing results and certification to standards commonly used in the sector
<i>Children's Rights and Business Principles</i>	Adherence to UNICEF's Children's Rights and Business Principles
<i>Environmental management</i>	ISO 14001:2015 certified
<i>Quality management</i>	ISO 9001:2015 certified

5. Add-on 5: Electrical lighting kit

Attribute	Minimum performance	Ideal performance
Supply Chain requirements		
<i>Weight and volume</i>	The kit is designed to have minimum packed weight and volume	
<i>Packaging</i>	The kit is packed to achieve minimum volume and weight, easy handling with limited risk of damages during transport, allows for re-packing, is eco-friendly and marked for easy identification, safe storage in wet and humid conditions of 5 years without compromising content	
<i>Storage life</i>	The packed kit has a storage life of 5 years under the conditions set out under the Use Case	
Product requirements		
<i>Electrical fittings</i>	<ul style="list-style-type: none"> • All elements in the kit that can be kept low-tech are low-tech • The lighting is designed to realize a 500lux illumination of the internal space. 2 switches are foreseen per 24m² illuminated space • The number of external lighting fixtures is 2, one above each of the doors, with an individual switch for each, realizing an approximate 900 lumen each • The number of sockets is 2 / 4 / 6, type F, 16 A, waterproof • The number of connections to the electrical grid or generator is 1 	

	<ul style="list-style-type: none"> • All required cabling is included, as well as all elements to safely and securely attach the cabling, lighting fixtures, switches and sockets to the tent frame • Grounding and breakers are included as needed for conformity with international standards
Performance requirements	
<i>Durability and maintenance</i>	The kit is designed to be operational in the conditions laid out under the Use Case, to withstand frequent handling and not requiring any maintenance, repair or replacement for 24 months
User requirements	
<i>Ease and safety of use</i>	<ul style="list-style-type: none"> • The kit and all of its elements are low-tech in use • Switches and sockets are all placed internally, for ease of use, taking into account the needs of people living with mobility impairments and low vision • Cables are safely and securely attached to the structure in a way that reduces the risk of tripping
Information requirements	
<i>Instructions</i>	<ul style="list-style-type: none"> • The package includes a laminated waterproof copy of use and safe disposal instructions • Instructions are made up primarily out of drawings describing pertinent points step-by-step • Instructions are A4 size • Text in instructions is in English, French and Arabic • All instructions can be consulted on the supplier's website. The link to the supplier's instructions is included
<i>Use instructions</i>	Use instructions address the installation of all elements of the electrical fitting
<i>Safe disposal instructions</i>	Safe disposal instructions address how the electrical fitting kit can be discarded with the least risk to the environment and the health and safety of people, considering that local recycling practices may not be up to the highest standards
Commercialization requirements	
<i>Documentation of compliance</i>	The kit comes with documentation of compliance to all of the above requirements, including testing results and certification to standards commonly used in the sector
<i>Children's Rights and Business Principles</i>	Adherence to UNICEF's Children's Rights and Business Principles
<i>Environmental management</i>	ISO 14001:2015 certified
<i>Quality management</i>	ISO 9001:2015 certified

6. Add-on 6: Partitioning kit

Attribute	Minimum performance	Ideal performance
Supply Chain requirements		
<i>Weight and volume</i>	The partitioning kit is designed to have minimum packed weight and volume	
<i>Packaging</i>	The partitioning kit is packed to achieve minimum volume and weight, easy handling, reducing risk of damages during transport, allows for re-packing, is eco-friendly, and marked for easy identification	

<i>Storage life</i>	The packed partitioning kit has a storage life of 3 years under the conditions set out under the Use Case	
Product requirements		
<i>Surface that can be partitioned</i>	The partitioning kit allows to divide the multipurpose tent into 2 spaces, or create a separated corner of approximately 6m ² enclosed space	
<i>Opening</i>	The partitioning kit allows to create a simple fabric overlap to function as passage from one space to another, or as entrance to the corner space	
<i>Suspension</i>	The partitioning kit includes the suspension system to hang the partitioning safely and securely onto the tent frame without sagging	
Performance requirements		
<i>Durability and maintenance</i>	The partitioning kit is designed to be operational in conditions set out in the Use Case, to withstand frequent handling without tearing and not requiring any maintenance, repair or replacement for 24 months	
<i>Opacity</i>	The partitioning is completely opaque	
User requirements		
<i>Easy use</i>	The partitioning kit is low-tech in use	
Information requirements		
<i>Instructions</i>	<ul style="list-style-type: none"> • The package includes a laminated waterproof copy of use and safe disposal instructions • Instructions are made up primarily out of drawings describing pertinent points step-by-step, A4 size • Text in instructions is in English, French and Arabic • All instructions can be consulted on the supplier's website. The website link to the supplier's instructions is included 	
<i>Use instructions</i>	Use instructions address the installation of the partition	
<i>Safe disposal instructions</i>	Safe disposal instructions address how the partition kit can be discarded with the least risk to the environment and the health and safety of people, considering that local recycling practices may not be up to the highest standards	
Commercialization requirements		
<i>Documentation of compliance</i>	The kit comes with the expectation of documentation of compliance to all of the above requirements. In particular the expectation is that testing results and certification to standards commonly used in the sector is included for tensile strength, tear resistance, rot proofing and flame behavior	
<i>Children's Rights and Business Principles</i>	Adherence to UNICEF's Children's Rights and Business Principles	
<i>Environmental management</i>	Proposed timelines for ISO14001 certification	ISO 14001:2015 certified
<i>Quality management</i>	Proposed timelines for ISO9001 certification	ISO 9001:2015 certified

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Children's Rights and Business Principles

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