



United Nations Global Service Centre

REQUEST FOR EXPRESSION OF INTEREST (EOI)

This notice is placed by UNGSC. The accuracy, reliability and completeness of the contents of furnished information is the responsibility of United Nations Global Service Centre. You are therefore requested to direct all queries regarding this EOI to United Nations Global Service Centre using the fax number or e-mail address provided below.

Title of the EOI:

Design, Supply, Installation and Commissioning of Modular 3D-Printed Accommodation Units for various UN Mission Locations

Date of this EOI: 21 February 2024

Closing Date for Receipt of EOI: 14 March 2024

EOI Number: EOIUNGSC22403

Beneficiary Country/Territory: Italy

Commodity/Service category: Engineering Design and Construction

Address EOI response by fax or e-mail to the Attention of: Marina D' Aposito

Fax Number: n/a

E-mail Address: unlb-procurement@un.org

UNSPSC Code:

95122100 - Accommodation buildings and structures

90111900 - Specialized accommodation services



DESCRIPTION OF REQUIREMENTS

The United Nations Global Service (UNGSC) seeks an appropriately qualified contractor to provide the design, supply, installation, and commissioning of a 3D Printed Accommodation Prototype at UNGSC Brindisi.

Typically, UN camps that host field missions are usually compounds of prefabricated accommodation units. This type of accommodation is subject to long lead times due to centralized distribution and disruptions in the supply chain in field locations. Moreover, they do not resist the very challenging conditions encountered in field environments and are not adapted to military units.

They are neither weatherproof nor 'soldier-proof' and deteriorate in a very short period.

With this project, the UNGSC is seeking to have an alternative to traditional UN camps through the innovation of 3D printed accommodation that could be "printed" directly at the desired location, with specialized large-scale 3D printers, and the use of local soil as printing raw material, aiming at shorter lead times, improved supply chain efficiency and reduced total cost of ownership.

Moreover, by enabling the use of locally sourced materials, adopting a more field-oriented approach, and encouraging local partnerships, 3D printing could also improve reverse logistics (materials can be recycled or disposed of faster). Once maintenance ceases and the roof is removed, the 3D printed envelope can naturally decompose back to soil, therefore revolutionizing disposal.

The Contractor shall provide:

- design, supply, installation, and commissioning of a full-scale operational 3D printed accommodation prototype (turn-key solution) at UNGSC Brindisi.
- the machinery, tools, materials, soil mixture, and equipment necessary to carry out the responsibilities mentioned. Equipment shall include doors and windows, floor and ceiling, plumbing, electrical installations, and reversible air conditioning.

As the UN operates in many different countries with varied geological environments, the 3D printing machinery shall be able to use the different soils in place to print raw materials for the walls and partitions.

For purposes of this requirement, the use of local soil or a derived formula based on at least 50% of local soil is required. The vendor shall conduct soil testing activities to select the appropriate formula.

About the prototype:

- it shall be a sustainable, economical, and practical alternative to existing prefabricated accommodation. It shall be based on a modular concept with the possibility of customizing the size according to the needs or use of the premises at a later stage. The size of the prototype shall be 25 to 30 sqm, with a minimum ceiling height of 2.70 m, and includes living space and bathroom capsule. The kitchen is not part of this requirement.

At this stage, the foundation slab is not part of the requirement, but respondents are encouraged to include this phase as an option in the cost estimate. Whichever option is chosen, construction shall be closely coordinated to plan for incorporated components;



- The supporting structure of the roof shall preferably be made of wood or metal, weather-resistant, minimizing the number of elements and the resulting connections, modular and adaptable, with correct insulation performance;
- it shall offer performances meeting international standards in terms of brightness, ventilation, thermal insulation (temperatures up to 55 °C and 100% humidity), air quality, and sound insulation, with optimized energy consumption.
- it shall withstand bad weather and other natural phenomena (wind, storm, heat, cold, earthquakes, floods);
- It shall be easy to dismantle and dispose of, and require minimum maintenance.
Once maintenance ceases and the roof is removed, the 3D printed envelope shall naturally decompose back to soil;
Once the methodology is standardized, setting up a unit shall not exceed that of a prefabricated unit, i.e., 3 to 5 days, excluding foundations, depending on weather conditions, as it affects the drying time of the mixture.

The main phases of the project are:

- Soil testing and design activities;
- Soil preparation and construction of the foundation slab (by UNGSC);
- 3D printing activities;
- Rendering and commissioning activities.

The full technical requirements and details will be provided with a formal solicitation document to be issued soon after the closing date for this EOI.

The invited vendors to the formal solicitation will need to provide references to similar completed projects (description and images); Details of how the 3D printing machinery will handle the use of different soils in place as printing raw material, and suggested development on the potential for modularization of this type of structure at a later stage.

In order for the Expression of Interest to be considered, the company must be registered with the United Nations Global Marketplace (UNGM) by visiting the website: www.ungm.org.



SPECIFIC REQUIREMENTS / INFORMATION (IF ANY)

In order to be awarded a Contract/Purchase Order, the Vendor must be registered with the UN Secretariat through the United Nations Global Marketplace (UNGM) for the required Level of Registration by the time of finalization of bid evaluation before the award.

NOTE

Information on tendering for the UN Procurement System is **available free of charge** at the following address: <https://www.ungm.org/Public/Notice>

Only the United Nations Global Marketplace (UNGM) has been authorised to collect a nominal fee from vendors that wish to receive automatically Procurement Notices or Requests for Expression Of Interest. Vendors interested in this Tender Alert Service are invited to subscribe on <http://www.ungm.org>

Vendors interested in participating in the planned solicitation process should submit the Vendor Response Form of this EOI electronically (through the link available on the next page) before the closing date set forth above.



VENDOR RESPONSE

NOTICE

- Companies can only participate in solicitations of the UN Secretariat after completing their registration (free of charge) at the United Nations Global Marketplace (www.ungm.org).
- As you express interest in the planned solicitation by submitting this response form, please verify that your company is registered under its **full legal** name on the United Nations Global Marketplace (www.ungm.org) and that your application has been submitted to the **UN Secretariat**.
- While companies can participate in solicitations after completion of registration at Basic Level, we strongly recommend all companies to register at least at **Level 1** under the United Nations Secretariat prior to participating in any solicitations.
- Companies are reminded of the restrictions of employment of former UN personnel that were involved in the procurement process during their last three years of service as per ST/SGB/2006/15, including (a) employing those personnel for one year after separation of service and (b) allowing those personnel to communicate with, or appear before, active UN personnel for matters related to the procurement process for two years after separation of service. Violation of the provisions of ST/SGB/2006/15 may lead to suspension of the registration of the company as a UN vendor.

PLEASE NOTE: You should express your interest to this EOI electronically at:

<https://www.ungm.org/Public/Notice/226952>

In case you have difficulties submitting your interest electronically, please contact unlb-procurement@un.org directly for instructions.



EOI INSTRUCTIONS

1) Registering as a Vendor with the United Nations

Vendors interested in fulfilling the requirement described above must be registered at the UN Global Marketplace (www.ungm.org) with the UN Secretariat in order to be eligible to participate in any solicitation. Information on the registration process can be found at <https://www.un.org/Depts/ptd/vendors>.

Prerequisites for Eligibility

In order to be eligible for UN registration, you must declare that:

- A. Your company (as well as any parent, subsidiary or affiliate companies) is not listed in, or associated with a company or individual listed in:
 - I. the Compendium of United Nations Security Council Sanctions Lists (<https://www.un.org/securitycouncil/content/un-sc-consolidated-list>), or
 - II. the IIC Oil for Food List website or, if listed on either, this has been disclosed to the United Nations Procurement Division in writing.
- B. Your company (as well as any parent, subsidiary or affiliate companies) is not currently removed or suspended by the United Nations or any other UN organisation (including the World Bank);
- C. Your company (as well as any parent, subsidiary or affiliate companies) is not under formal investigation, nor have been sanctioned within the preceding three (3) years, by any national authority of a United Nations Member State for engaging or having engaged in proscribed practices, including but not limited to: corruption, fraud, coercion, collusion, obstruction, or any other unethical practice;
- D. Your company has not declared bankruptcy, are not involved in bankruptcy or receivership proceedings, and there is no judgment or pending legal action against your company that could impair your company's operations in the foreseeable future;
- E. Your company does not employ, or anticipate employing, any person(s) who is, or has been a UN staff member within the last year, if said UN staff member has or had prior professional dealings with the Vendor in his/her capacity as UN staff member within the last three years of service with the UN (in accordance with UN post-employment restrictions published in ST/SGB/2006/15).
- F. Your company undertakes not to engage in proscribed practices (including but not limited to: corruption, fraud, coercion, collusion, obstruction, or any other unethical practice), with the UN or any other party, and to conduct business in a manner that averts any financial, operational, reputational or other undue risk to the UN.

For Registered Vendors: Vendors already registered at the UN Global Marketplace with the UN Secretariat must ensure that the information and documentation (e.g. financial statements, address, contact name, etc.) provided in connection with their registration are up to date in UNGM. Please verify and ensure that your company is registered under its full legal name.

For Vendors Interested in Registration: Vendors not yet registered should apply for registration on the United Nations Global Marketplace (<http://www.ungm.org>); information on the registration process can be found at <https://www.un.org/Depts/ptd/vendors>. Vendors must complete the registration process prior to the closing date of the REOI. Vendors who have not completed the UNGM registration process with the UN Secretariat before the closing date of the REOI are not considered eligible to participate in solicitations of the UN Secretariat. We strongly recommend all companies to register at least at Level 1 under the UN Secretariat prior to participating in any solicitations.

IMPORTANT NOTICE: Any false, incomplete or defective vendor registration may result in the rejection of the application or cancellation of an already existing registration.

2) EOI Process

Vendors interested in participating in the planned solicitation process should forward their expression of interest (EOI) to United Nations Global Service Centre (UNGSC) by the closing date set forth in this EOI. *Due to the high volume of communications UNGSC is not in a position to issue confirmation of receipt of EOIs.*

Please note that no further details of the planned solicitation can be made available to the vendors prior to issuance of the solicitation documents.

This EOI is issued subject to the conditions contained in the EOI introductory page available at <https://www.un.org/Depts/ptd/eoi>.

