



REQUEST FOR QUOTATION (RFQ)

RFQ Reference: 455-2021-UNDP-UKR-RFQ-RPP	Date: 02 April 2021
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SECTION 1: REQUEST FOR QUOTATION (RFQ)

UNDP kindly requests your quotation for the provision of STEM (Science, Technology, Engineering, Math) equipment for regional STEM centers in Donetsk and Luhansk oblasts as detailed in Annex 1 of this RFQ.

This Request for Quotation comprises the following documents:

Section 1: This request letter

Section 2: RFQ Instructions and Data

Annex 1: Schedule of Requirements

Annex 2: Quotation Submission Form

Annex 3: Technical and Financial Offer

When preparing your quotation, please be guided by the RFQ Instructions and Data. Please note that quotations must be submitted using Annex 2: Quotation Submission Form and Annex 3 Technical and Financial Offer, by the method and by the date and time indicated in Section 2. It is your responsibility to ensure that your quotation is submitted on or before the deadline. Quotations received after the submission deadline, for whatever reason, will not be considered for evaluation.

Thank you and we look forward to receiving your quotations.

Issued by:

Signature: Manal Fouani

Name: **Ms. Manal Fouani**

Title: **Deputy Resident Representative UNDP Ukraine**

Date: **2-Apr-2021**

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SECTION 2: RFQ INSTRUCTIONS AND DATA

Introduction	Bidders shall adhere to all the requirements of this RFQ, including any amendments made in writing by UNDP. This RFQ is conducted in accordance with the UNDP Programme and Operations Policies and Procedures (POPP) on Contracts and Procurement Any Bid submitted will be regarded as an offer by the Bidder and does not constitute or imply the acceptance of the Bid by UNDP. UNDP is under no obligation to award a contract to any Bidder as a result of this RFQ. UNDP reserves the right to cancel the procurement process at any stage without any liability of any kind for UNDP, upon notice to the bidders or publication of cancellation notice on UNDP website.
Deadline for the Submission of Quotation	23:59 (Kyiv Time, GMT+3) 15-Apr-2021 If any doubt exists as to the time zone in which the quotation should be submitted, refer to http://www.timeanddate.com/worldclock/. For eTendering submission - as indicated in eTendering system. Note that system time zone is in EST/EDT (New York) time zone.
Method of Submission	Quotations must be submitted as follows: ☐ E-tendering ☒ Dedicated Email Address ☐ Courier / Hand delivery ☐ Other Click or tap here to enter text. Bid submission address: tenders.ua@undp.org ▪ File Format: .ZIP, .PDF ▪ File names must be maximum 60 characters long and must not contain any letter or special character other than from Latin alphabet/keyboard. ▪ All files must be free of viruses and not corrupted. ▪ Max. File Size per transmission: 20 Mb ▪ Mandatory subject of email: 455-2021-UNDP-UKR-RFQ-RPP ▪ Multiple emails must be clearly identified by indicating in the subject line “email no. X of Y”, and the final “email no. Y of Y”. ▪ It is recommended that the entire Quotation be consolidated into as few attachments as possible. ▪ The bidder should receive an email acknowledging email receipt. [For eTendering method, click the link https://etendering.partneragencies.org and insert Event ID information] • Insert BU Code and Event ID number Detailed instructions on how to submit, modify or cancel a bid in the eTendering system are provided in the eTendering system Bidder User Guide and Instructional videos available on this link: http://www.undp.org/content/undp/en/home/operations/procurement/business/procurement-notices/resources/
Cost of preparation of quotation	UNDP shall not be responsible for any costs associated with a Supplier’s preparation and submission of a quotation, regardless of the outcome or the manner of conducting the selection process.
Supplier Code of Conduct, Fraud, Corruption,	All prospective suppliers must read the United Nations Supplier Code of Conduct and acknowledge that it provides the minimum standards expected of suppliers to the UN. The Code of Conduct, which includes principles on labour, human rights, environment and ethical conduct may be found at: https://www.un.org/Depts/ptd/about-us/un-supplier-code-conduct Moreover, UNDP strictly enforces a policy of zero tolerance on proscribed practices, including fraud, corruption, collusion, unethical or unprofessional practices, and obstruction of UNDP vendors and

	requires all bidders/vendors to observe the highest standard of ethics during the procurement process and contract implementation. UNDP's Anti-Fraud Policy can be found at http://www.undp.org/content/undp/en/home/operations/accountability/audit/office_of_audit_and_investigation.html#anti
Gifts and Hospitality	Bidders/vendors shall not offer gifts or hospitality of any kind to UNDP staff members including recreational trips to sporting or cultural events, theme parks or offers of holidays, transportation, or invitations to extravagant lunches, dinners or similar. In pursuance of this policy, UNDP: (a) Shall reject a bid if it determines that the selected bidder has engaged in any corrupt or fraudulent practices in competing for the contract in question; (b) Shall declare a vendor ineligible, either indefinitely or for a stated period, to be awarded a contract if at any time it determines that the vendor has engaged in any corrupt or fraudulent practices in competing for, or in executing a UNDP contract.
Conflict of Interest	UNDP requires every prospective Supplier to avoid and prevent conflicts of interest, by disclosing to UNDP if you, or any of your affiliates or personnel, were involved in the preparation of the requirements, design, specifications, cost estimates, and other information used in this RFQ. Bidders shall strictly avoid conflicts with other assignments or their own interests, and act without consideration for future work. Bidders found to have a conflict of interest shall be disqualified. Bidders must disclose in their Bid their knowledge of the following: a) If the owners, part-owners, officers, directors, controlling shareholders, of the bidding entity or key personnel who are family members of UNDP staff involved in the procurement functions and/or the Government of the country or any Implementing Partner receiving goods and/or services under this RFQ. The eligibility of Bidders that are wholly or partly owned by the Government shall be subject to UNDP's further evaluation and review of various factors such as being registered, operated and managed as an independent business entity, the extent of Government ownership/share, receipt of subsidies, mandate and access to information in relation to this RFQ, among others. Conditions that may lead to undue advantage against other Bidders may result in the eventual rejection of the Bid.
General Conditions of Contract	Any Purchase Order or contract that will be issued as a result of this RFQ shall be subject to the General Conditions of Contract Select the applicable GTC: ☒ General Terms and Conditions / Special Conditions for Contract. ☐ General Terms and Conditions for de minimis contracts (services only, less than \$50,000) ☐ General Terms and Conditions for Works Applicable Terms and Conditions and other provisions are available at UNDP/How-we-buy
Special Conditions of Contract	☒ Cancellation of PO/Contract if the delivery/completion is delayed by 30 days. ☒ Others: Liquidated damages: up to 0.1% of total contract amount per each day of delay may be applied on discretion of UNDP
Eligibility	A vendor who will be engaged by UNDP may not be suspended, debarred, or otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization. Vendors are therefore required to disclose to UNDP whether they are subject to any sanction or temporary suspension imposed by these organizations. Failure to do so may result in termination of any contract or PO subsequently issued to the vendor by UNDP. It is the Bidder's responsibility to ensure that its employees, joint venture members, sub-contractors, service providers, suppliers and/or their employees meet the eligibility requirements as established by UNDP. Bidders must have the legal capacity to enter a binding contract with UNDP and to deliver in the country, or through an authorized representative.
Currency of Quotation	Quotations shall be quoted in ☒ United States Dollars. Due to fluctuations in the national currency, it is recommended to indicate the price in dollars as risk mitigation measure ☒ Local Currency: UAH

Joint Venture, Consortium or Association	If the Bidder is a group of legal entities that will form or have formed a Joint Venture (JV), Consortium or Association for the Bid, they shall confirm in their Bid that : (i) they have designated one party to act as a lead entity, duly vested with authority to legally bind the members of the JV, Consortium or Association jointly and severally, which shall be evidenced by a duly notarized Agreement among the legal entities, and submitted with the Bid; and (ii) if they are awarded the contract, the contract shall be entered into, by and between UNDP and the designated lead entity, who shall be acting for and on behalf of all the member entities comprising the joint venture, Consortium or Association. Refer to Clauses 19 – 24 under Solicitation policy for details on the applicable provisions on Joint Ventures, Consortium or Association.
Only one Bid	The Bidder (including the Lead Entity on behalf of the individual members of any Joint Venture, Consortium or Association) shall submit only one Bid, either in its own name or, if a joint venture, Consortium or Association, as the lead entity of such Joint Venture, Consortium or Association. Bids submitted by two (2) or more Bidders shall all be rejected if they are found to have any of the following: a) they have at least one controlling partner, director or shareholder in common; or b) any one of them receive or have received any direct or indirect subsidy from the other/s; or b) they have the same legal representative for purposes of this RFQ; or c) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about, or influence on the Bid of, another Bidder regarding this RFQ process; d) they are subcontractors to each other's Bid, or a subcontractor to one Bid also submits another Bid under its name as lead Bidder; or e) some key personnel proposed to be in the team of one Bidder participates in more than one Bid received for this RFQ process. This condition relating to the personnel, does not apply to subcontractors being included in more than one Bid.
Duties and taxes	Article II, Section 7, of the Convention on the Privileges and Immunities provides, inter alia, that the United Nations, including UNDP as a subsidiary organ of the General Assembly of the United Nations, is exempt from all direct taxes, except charges for public utility services, and is exempt from customs restrictions, duties, and charges of a similar nature in respect of articles imported or exported for its official use. All quotations shall be submitted net of any direct taxes and any other taxes and duties, unless otherwise specified below: All prices must: ☐ be inclusive of VAT and other applicable indirect taxes ☒ be exclusive of VAT and other applicable indirect taxes according to Project Card Registration № 4019-04 and 4093-04
Language of quotation	☒ English, and/or ☒ Ukrainian, and/or ☒ Russian All the documentation including catalogues, instructions and operating manuals should be in Ukrainian (additionally in English/Russian if available)
Documents to be submitted	Bidders shall include the following documents in their quotation: ☒ Annex 2: Quotation Submission Form duly completed and signed ☒ Annex 3: Technical and Financial Offer duly completed and signed and in accordance with the Schedule of Requirements in Annex 1 ☒ Company Profile. ☒ Registration certificate; ☒ Minimum 2 recommendation letters from previous customers or copies of contract for provision of similar goods; ☒ Extract (fragment) of the manual study guide for students, which reflects the content of the manual and a description of laboratory / practical work; ☒ Extract (fragment) of the manual teacher's study guide, which reflects the contents of the manual.
Quotation validity period	Quotations shall remain valid for 60 days days from the deadline for the Submission of Quotation.
Price variation	No price variation due to escalation, inflation, fluctuation in exchange rates, or any other market factors shall be accepted at any time during the validity of the quotation after the quotation has been received.

Partial Quotes	☒ Not permitted ☐ Permitted Insert conditions for partial quotes and ensure that the requirements are properly listed in lots to allow partial quotes
Alternative Quotes	☒ Not permitted ☐ Permitted If permitted, an alternative quote may be submitted only if a conforming quote to the RFQ requirements is submitted. Where the conditions for its acceptance are met, or justifications are clearly established, Click or tap here to enter text. reserves the right to award a contract based on an alternative quote. If multiple/alternative quotes are being submitted, they must be clearly marked as “Main Quote” and “Alternative Quote”
Payment Terms	☒ 100% within 30 days after receipt of goods, works and/or services and submission of payment documentation. ☐ Other Click or tap here to enter text.
Conditions for Release of Payment	☐ Passing Inspection [specify method, if possible] Complete Installation ☐ Passing all Testing [specify standard, if possible] ☐ Completion of Training on Operation and Maintenance [specify no. of trainees, and location of training, if possible] ☒ Written Acceptance of Goods, Services and Works, based on full compliance with RFQ requirements ☐ Others [pls. specify]
Contact Person for correspondence, notifications and clarifications	Procurement Unit, UNDP Ukraine E-mail address: procurement.rpp.ua@undp.org Attention: Quotations shall not be submitted to this address but to the address for quotation submission above. Otherwise, offer shall be disqualified. Any delay in UNDP's response shall be not used as a reason for extending the deadline for submission, unless UNDP determines that such an extension is necessary and communicates a new deadline to the Proposers.
Clarifications	Requests for clarification from bidders will not be accepted any later than 6 days before the submission deadline. Responses to request for clarification will be communicated via email by 09 April 2021
Evaluation method	☒ The Contract or Purchase Order will be awarded to the lowest price substantially compliant offer ☐ Other Click or tap here to enter text.
Evaluation criteria	<u>Administrative Requirements:</u> ☒ Full compliance with all requirements as specified in Annex 1; ☒ Full acceptance of the Contract General Terms and Conditions; ☒ Offers must be submitted within the stipulated deadline; ☒ Offers must meet required Offer Validity; ☒ Offers have been signed by the authorized representative; ☒ Offers include requested company/organization documentation as mentioned above in “Documents to be submitted” section; ☒ Officially registered company (for Ukrainian companies – company should be registered in the territory controlled by the government of Ukraine). <u>Technical Requirements:</u> ☒ Technical responsiveness to stipulated requirements in specification. ☒ At least 2 years of experience in the field of supply of similar products per relevant lot. ☒ Minimum 2 recommendation letters from previous customers or copies of contract for provision of similar goods. ☒ The warranty period for all equipment must be not less than 12 (twelve) months. All equipment must have official warranty service in Ukraine ☒ Delivery of the equipment must be done within 60 (sixty) calendar days from the date of signing

	the Contract.
Right not to accept any quotation	UNDP is not bound to accept any quotation, nor award a contract or Purchase Order
Right to vary requirement at time of award	At the time of award of Contract or Purchase Order, UNDP reserves the right to vary (increase or decrease) the quantity of services and/or goods, by up to a maximum twenty-five per cent (25%) of the total offer, without any change in the unit price or other terms and conditions.
Type of Contract to be awarded	☒ Purchase Order ☒ Contract Face Sheet (Goods and-or Services) (this template is also utilised for Long-Term Agreement) and if an LTA will be signed, specify the document that will trigger the call-off. E.g., PO, etc.) ☐ Contract for Works ☐ Other Type/s of Contract [pls. specify]
Expected date for contract award.	03 May 2021
Publication of Contract Award	UNDP will publish the contract awards valued at USD 100,000 and more on the websites of the CO and the corporate UNDP Web site.
Policies and procedures	This RFQ is conducted in accordance with UNDP Programme and Operations Policies and Procedures
UNGM registration	Any Contract resulting from this RFQ exercise will be subject to the supplier being registered at the appropriate level on the United Nations Global Marketplace (UNGM) website at www.ungm.org . The Bidder may still submit a quotation even if not registered with the UNGM, however, if the Bidder is selected for Contract award, the Bidder must register on the UNGM prior to contract signature.

ANNEX 1: SCHEDULE OF REQUIREMENTS

Specification/Terms of Reference

SPECIFICATION

for STEM (Science, Technology, Engineering, Math) equipment for regional STEM centers in Donetsk and Luhansk oblasts

1. Description of the project

The ongoing conflict in eastern Ukraine has had a direct and highly negative impact on social cohesion, resilience, livelihoods, community security, and the rule of law. Recognizing the need to urgently address reconstruction, economic recovery and peacebuilding needs in areas affected both directly and indirectly by the conflict, in late 2014 the Government of Ukraine requested technical assistance and financial support from the international community to assess priority recovery needs.

UNDP has been active and present in eastern Ukraine for the past decade, prior to the conflict, with a focus on community development, civil society development, and environmental protection. Work on addressing the specific conflict-related development challenges discussed above built on this earlier engagement and established partnerships and started in 2015 through the United Nations Recovery and Peacebuilding Programme (UN RPP), a multi-donor funded framework programme implemented by four United Nations partnering agencies: the United Nations Development Programme (UNDP), the UN Entity for Gender Equality and the Empowerment of Women (UN Women), the United Nations Population Fund (UNFPA) and the Food and Agriculture Organization of the United Nations (FAO).

The Programme, which operates on the basis of a pooled funding arrangement, follows a multi-sectoral programme-based approach and is implemented using an area-based methodology. With the current project, it is a unifying interventions framework for projects funded by 13 international partners: European Union, European Investment Bank, as well as the governments of the United Kingdom, Denmark, Canada, Netherlands, Germany, Norway, Poland, Sweden, Switzerland and Japan.

The UN RPP was designed to respond to and mitigate the causes and effects of the conflict. It is based on findings of the Recovery and Peacebuilding Assessment (RPA) and is aligned to the State Target Programme for Recovery as well as to the two oblasts development strategies up to 2020. The UN RPP involves three pillars for action: 1) restoration of infrastructure and economic recovery; 2) support to local governance and related capacity building; and 3) social resilience and peacebuilding. It is an integral component of the UNDP Country Programme and is therefore fully aligned with the United Nations Partnership Framework (UNPF). It is closely interlinked with the Democratic Governance and Reform Programme, operating nationally and in all of Ukraine's regions and is consistent with the SDGs, in particular SDG 16 (Peace, Justice and Strong institutions).

As an area-based programme specifically developed for the conflict-affected areas of eastern Ukraine, the UN RPP addresses the key stabilization, peacebuilding, economic and governance priority needs in eastern Ukraine following the start of the conflict. It takes into account the opportunities that have arisen from the Minsk Protocol of September 2014 and the renewal of its cease-fire provisions (the latest cease-fire having been agreed in March 2018) and is also fully adjusted to the humanitarian-development nexus. In 2019 program was reinforced along the Azov Sea coastline, including extension to Zaporizhzhia region.

The Programme's interventions are grouped under the following key Programme components, which reflect the region's priority needs:

Component I: Economic Recovery and Restoration of Critical Infrastructure

Component II: Local Governance and Decentralization Reform

Component III: Community Security and Social Cohesion (CSSC).

The important area of work for UNDP is promoting inclusive education for children in Donetsk and Luhansk oblasts. Therefore, in the framework of the agreed action plan for 2021, UNDP is

seeking to provide the necessary equipment for two regional STEM centers in Donetsk and Luhansk oblasts.

2. Scope of work

- Provision of required goods by the Contractor in accordance with Specification.
- Delivery of goods under each Lot shall be done to the addresses specified in Section 4.

3. Technical specification

Lot 1. STEM equipment

No.	Product name and specification requirements not less, than specified	Number of units of goods to the content of all components
1.1	STEM-kit with programmable electronic module and set of sensors for practical classes in biology, physics, chemistry and geography Complete set must include: Mobile platform with integrated manipulator – 1 pc Weight of the transported cargo: not less than 1 kg; Continuous operation time: not less than 2 hours; Number of mobility steps: not less than 3; Built-in microcontroller with the following characteristics: - microcontroller: ATmega328; - USB-UART adapter (ATMega16u2); - additional drivers not required; The mobile platform with the integrated manipulator must include: - batteries - battery storage box Battery requirements: - type: Li-ion batteries with protection board - nominal capacity: not less than 3200 mAh Moving elements must be put in motion using servomotors Servomotors must be controlled by the I2C protocol. Interfaces for connecting additional devices: analog, digital, I2C, SPI. Microcontroller Arduino Uno – 2 pcs Type: ATmega328; Adapter type: USB-UART adapter (ATMega16u2), installation of additional drivers not required; Number of digital inputs / outputs: 14 (incl 6 PWM) Number of analog inputs: 6 Flash program memory: not less than 32Kb	16

	Operational memory: not less than 2Kb Body material: acrylic body Educational shield – 1 pc Adapted to the S4A learning environment by using the S4A-compatible ports. The educational shield must contain the following elements: Color LEDs: green – 2; red color - 2, yellow - 1, blue – 1; Photoresistive light sensor: 1 Clock buttons: 2 Piezzo buzzer: 1; RGB LED: 1; Number of servomotors connected simultaneously: 3 Accessible digital and analog ports of the controller. Battery – 2 pcs Type: Li-ion with protection board Nominal capacity: not less than 3200 mAh Maximum discharge current: not less than 4.8 A Nominal voltage: not less than 3.6 V Minimum voltage: not less than 2.75 V Maximum voltage: not less than 4.2 V Separate storage box: Yes Battery chargers: Yes Battery compartment – 1 pc Compartment for two batteries (type Li-ion with protection board) with series connection and available power connector 2.1x5.5 mm Breadboard power supply module 5V/3.3V – 1 pc Input voltage: DC 6 ~ 15V Output voltage to USB: 5V Output voltage on contacts: 3.3V / 5V Output current on USB: 500mA Output current on contacts: 1A-5V / 800mA-3.3V Overpadding protection Converter – 1 pc Converter type: step-down Input voltage: 5-48 V Output voltage: 0.5 - 40 V Maximum load current: not less than 3 A Voltage step-down converter with regulation of current and voltage – 1 pc Type: step-down voltage converter with output current and voltage limitation without galvanic isolation Conversion mode: asynchronous Input voltage: 8-36 V	
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	Output voltage: 1.25-32 V Minimum difference between input and output voltages: no more than 0.3 V Output current: adjustable, not less than 5 A Solar panel – 1 pc Operating voltage: not less than 5.5 V Operating current: not less than 170 mA Solderless breadboard – 2 pcs Number of points: 400 Number of power connection lines: 2 Self-adhesive surface on the reverse side Set of breadboard jumper wires, type M-M – 40 pcs Length: 200mm Set of breadboard jumper wires, type F-M – 40 pcs Length: 200mm Set of breadboard jumper wires, type F-F – 40 pcs Length: 200mm Set of jumper wires for Arduino – 1 pc 240mm – 5 pcs 200mm – 5 pcs 150mm – 8 pcs 110mm – 47pcs Infrared remote control and infrared receiver – 1 pc Maximum distance: not less than 8 m Effective angle: at least 60 degrees Number of control buttons: not less than 17 16-button membrane keyboard – 1 pc Flex length: not less than 86 mm Connector: 2.54mm pitch Maximum voltage: not more than 35 V, 100 mA Insulation resistance: not less than 100 MOhm, 100 V Sharpness of contacts: not more than 5 msec Lifetime: at least 1 million clicks Joystick – 1 pc Operating voltage: 5 V Availability of X-axis control Availability of Y-axis control Button: Yes Set of buttons with cap – 1 pc Contact resistance: not less than 100 mOhm Operating voltage: no more than 12V / 100 mA	
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Mounting method: surface Lifetime: at least 100,000 times Size: 12 mm Number of buttons in the set: at least 5 Button caps of different colors Sensor module – 1 pc Number of channels: not less than 4 LED pressure indication is available Operating voltage: 2.4 V ~ 5.5 V RFID module – 1 pc Supply voltage: not more than 3.3 V Operating frequency: 13.56 MHz Reading range: 0 ~ 60 mm Interface: SPI, maximum transfer rate not less than 10Mbps Reading and writing RFID tags Includes: RFID module, access card, access keychain Real Time Clock module – 1 pc Thermal compensation and stride correction Counter of seconds, minutes, hours, days of the week, months and years with a calendar with a correction of the leap year until 2100 Stability of the generator: ± 2 ppm in the temperature range from 0 ° C - + 40 ° C Stability of the generator: $\pm 3,5$ ppm in the temperature range from -40 ° C - + 85 ° C Accuracy of internal digital temperature sensor ± 3 ° C Clock accuracy correction register Programmable output of rectangular pulses 2 alarm clocks with the possibility of adjustment 2 I2C bus modes: Standard (100kHz) and Fast (400kHz) Operating supply voltage: from 3.0 V to 5.5 V Battery included Relay module 5 V 10 A with optocoupler – 1 pc Maximum switching current of the relay: not less than 10 A at 250 V Equipped with LED that indicates the current status of the relay contacts Encoder module – 1 pc Discreteness: at least 20 steps per rotation Slider variable resistor module – 1 pc Voltage: 3.3-5 V Signal: analog Resistance: not less than 10K	
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	Variable resistor – 2 pcs Nominal resistance: 10 kOhm Max. voltage: 150 V AC Nominal power: not less than 0.125 W Bluetooth module – 1 pc Communication protocol: Bluetooth Specification v2.0 + EDR Frequency: GFSK Sending power ≤ 4 dBm, Class 2 Reception power ≤ -84 dBm at 0.1% BER Asynchronous speed: 2.1 Mbps (Max) / 160 kbps, Synchronous speed: 1 Mbps / 1 Mbps Security authentication and encryption Bluetooth serial port profile Support for both slave and master mode Wi-fi module – 1 pc Protocol: WiFi 802.11 b / g / n Support for STA / AP / STA + AP modes Built-in TCP / IP protocol stack with support for multiple client connections (up to 5) D0 ~ D8, SD1 ~ SD3: can be used as GPIO, PWM, IIC, etc. Output current: 15 mA AD0: 1 ADC output Power supply: 4.5 - 9V (10V maximum) USB power supply with debugging interface Transmission speed: 110-460800 baud Support for UART / GPIO data interfaces Reflashing from the cloud or via USB Ethernet shield – 1 pc Operating voltage: 5 V Connection speed: 10/100 Mbps Compatible with 802.3 standard Support for TCP, UDP, IPv4, ICMP, ARP, IGMP and PPPoE protocols At least 16 Kbytes of internal data buffer Interaction with the controller via the SPI interface Integrated card reader: Yes MicroSD card 16GB Class 10 with adapter – 1 pc Fully complies with the standard SD 2.0 Compatible with card readers and devices that support MicroSDHC Compatible with Secure Digital Music Initiative (SDMI) Recording speed: at least 15 MB / sec Read speed: at least 80 MB / sec Multimeter – 1 pc	
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	Display: LCD 50x20 mm Power supply: Krona 9V battery, available in the set Constant voltage (DC), V: 200m / 2000m / 20/200/1000 Alternating voltage (AC), V: 200/750 DC, A: 2000μ / 20m / 200m / 10 Resistance, Ohm: 2000K / 200K / 20K / 2000/200 Possibility of testing diodes, transistors The multimeter has a built-in generator and a buzzer LED panel for visual indication of the output state of the microcontroller – 1 pc Supply voltage: 3.3-12 V Number of LEDs: not less than 6 pcs Type of indicators: common cathode Number of PIN connectors: at least 7 Schmitt Inverter Trigger 74HC14 – 1 pc Supply voltage: from 2V to 6V Output load capacity: 10 LSTTL inputs Static current consumption: 20 μA Signal delay time: 11 μs Output current: 4 mA at 5V Input current: less than 1 μA Housing type: DIP-14 Shear register 74HC595N – 4 pcs Housing type: PDIP-16 RoHS: Yes Technology: CMOS Operating voltage (typical): 2.5 / 3.3 / 5V Operating voltage (min.): 2V Operating voltage (max.): 6V Operating temperature range: -40 ... +85C Number of pins: 16 Set of resistors 0.25W – 1 pc 10 Ω – 20pcs 22 Ω – 20pcs 47 Ω – 20pcs 100 Ω – 20pcs 150 Ω – 20pcs 200 Ω – 20pcs 220 Ω – 20pcs 270 Ω – 20pcs 330 Ω – 20pcs 470 Ω – 20pcs 510 Ω – 20pcs 680 Ω – 20pcs 1 kΩ – 20pcs 2 kΩ – 20pcs 2.2 kΩ – 20pcs	
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3.3 kΩ – 20pcs 4.7 kΩ – 20pcs 5.1 kΩ – 20pcs 6.8 kΩ – 20pcs 10 kΩ – 20pcs 20 kΩ – 20pcs 47 kΩ – 20pcs 51 kΩ – 20pcs 68 kΩ – 20pcs 100 kΩ – 20pcs 220 kΩ – 20pcs 300 kΩ – 20pcs 470 kΩ – 20pcs 680 kΩ – 20pcs 1 MΩ – 20pcs LCD display – 1 pc I2C interface 16 x 2 format Power supply: not less than 5V OLED display – 1 pc Screen size: at least 0.96 " Screen type: OLED 4-pin supply voltage: 3.3-6 V Display resolution: at least 128 x 64 Availability of OLED module driver Viewing angle: not less than 160 degrees Availability of storage box Passive buzzer – 1 pc Power supply 3.3 - 5 V Buzzer – 1 pc Power supply 3.3 - 5 V LED matrix – 1 pc Supply voltage: 1.8-2.3 V Array size: at least 8 x 8 points The size of the matrix: 37 x 37 mm Nominal pixel current: 20 mA Output: anode Module of 4-point LED matrices – 1 pc Power supply: 5 V Complete set: 8x8 LED matrix Number of matrices: not less than 4 Soldered printed circuit board MAX7219 chip	
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	10-segment 4-color progress bar – 1 pc 10 LEDs in one housing, each with its own anode and cathode. 4 colors: 2 red, 3 yellow, 4 green and 1 blue 7-segment 1-digit red LED indicator – 4 pcs RoHS: Yes Digit height: not less than 0.56 inches Output: cathode 7-segment 4-digit LED indicator – 1 pc Separators: vertical colon and decimal points Display type: 7-segment Number of digits: not less than 4 Digit height: not less than 0.56 inches Output: cathode Set of colored LEDs – 1 pc Red: 3 mm – not less than 10 pieces 5 mm – not less than 10 pieces Yellow: 3 mm – not less than 10 pieces 5 mm – not less than 10 pieces Green: 3 mm – not less than 10 pieces 5 mm – not less than 10 pieces Blue: 3 mm – not less than 10 pieces 5 mm – not less than 10 pieces White: 3 mm – not less than 10 pieces 5 mm – not less than 10 pieces Rated current: 20 mA LED-light - 4 pcs RGB type General cathode Diameter - not less than 5 mm The lens is matte Circle with LEDs – 1 pc Number of LEDs: not less than 12 Supply voltage: 4-7 V DC LED type: RGB WS2812 Interface: Single-wire consecutive Servomotor – 1 pc Speed without load: 0.12 sec / 60 degrees when powered by 4.8V Torque: 2 kg / cm	
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	Temperature range: 0 to + 50°C Dead zone width: 4 microseconds Operating supply voltage: 3.5-5 V Current consumption in motion: 50-80 mA Current consumption in stand-by: 5-10 mA Angle of rotation: 180 degrees Dimensions: 3.3 cm x 3 cm x 1.3 cm Stepper motor – 1 pc Nominal supply voltage: 5 V (direct current) Number of phases: 4 Number of strides: 64 Number of microstrides: 4096 Stride angle: 5.625 degrees Nominal frequency: 100 Hz Nominal resistance of coil (at 25 degrees): 50 Ohms Peak current of one coil: 320 mA Idling frequency (clockwise): 600 Hz Idling frequency (counterclockwise): 1000 Hz Torque (clockwise, at a frequency of 120 Hz): 34.3 N/m Pull in torque: 343 g/cm Electrical safety class: A Noise level <40dB Stepper motor driver – 1 pc Compatibility with 5V and 12V unipolar motors. Compatibility with standard Arduino Stepper library Number of light diodes: 4 (1 per channel) Micro electric motor – 2 pcs Supply voltage: 3-6 V Speed without load: at least 9000 ± 10% RPM Two-channel motor driver – 1 pc Power supply of motors: not less than 2.5 V - 15 V Operating voltage: from 2.7 V to 5.5 V Maximum motor current: 1.2 A (average) / 3.2 A (peak) Fan – 1 pc Engine type: brushless Dimensions: not less than 30 x 30 x 10 mm Nominal voltage: 5 V Resource: at least 35,000 hours Universal sound sensor – 1 pc Analog voltage output from the microphone Digital output of the threshold comparator Comparator: Yes Power indicator: Yes Digital output status indicator: Yes Operating voltage: 4 - 6 V	
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	Ultrasonic distance sensor – 1 pc Operating voltage 3.8 - 5.5 V The maximum distance: not less than 1500 mm The minimum distance: 0 cm Resolution: not less than 3 mm Pulse width: 10 µs Angle: 15 degrees Sensor mount: Yes Light sensor – 1 pc Sensitive element: photoresistor Adjustment of a threshold of operation by the variable resistor Operating voltage: from 3.3 V to 5 V Comparator: Yes Digital and analog outputs: Yes Infrared motion sensor – 1 pc Detection range: within at least 0-7 m Angle of operation: not less than 110 ° at a distance of up to 7 m Supply voltage: 4.5 - 12 V Delay time is not worse than 0.3 - 300 seconds with the possibility of adjustment Method of operation: repetitive and non-repetitive switching Infrared distance sensor – 1 pc Operating voltage: 4.5-5.5 V Output signal type: analog Average time for updating information for output: no more than 16.5 ms Measuring distance: not less than 10 to 80 cm Interference sensor – 1 pc Obstacle detection distance: not worse than 2-30 cm Operating voltage: 3.3 to 5 V Comparator: Yes Line sensor – 2 pcs Supply voltage: 3.3-5 V Fire sensor module – 1 pc Definition wavelength: 760nm ~ 1100 m. Operating voltage: 3.3 - 5 V Comparator: Yes Trigger angle: up to 60 degrees Detection distance: not less than 80 cm Infrared thermo module – 1 pc	
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	Operating voltage: from 3V to 5V Comparator: Yes Range of the measured temperature: at least 20 to 80 ° C Built-in digital output and supply voltage status indicator Digital and analog outputs Color sensor – 1 pc Color determination distance: not less than 10 mm Availability of high-quality conversion of light intensity into frequency Availability of connection directly to the microcontroller Operating voltage: 3 - 5 V RGB sensor and gesture sensor module – 1 pc RGBC light sensor, proximity and gesture detector with IR indicator in the optical module Detection distance: not less than 100 mm Sensitivity to different directions of movement Measurement of the direction and speed of approach and gestures Factory calibration Humidity and temperature sensor module – 1 pc Supply voltage: 3-5 V Measuring humidity range: not worse than within 20-90% RH ± 5% (max.) Measuring temperature range: not less than 0-50 °C ± 2% (max.) Comparator: Yes Soil moisture sensor (hygrometer) – 1 pc Measuring element: metallized probe Comparator: Yes Sensor outputs: digital and analog Sensor supply voltage: 3.3 - 5 V Soil moisture sensor – 1 pc Humidity measurement method: capacitive Output type: analog Supply voltage: from 3.3 to 5.5 V Output voltage: from 0 V to 3.0 V Temperature sensor – 1 pc Operating voltage: from 3 V to 5.5 V Accuracy: ± 0.5 ° C in the range -10 ° C to + 85 ° C Operating temperature range: from -55 to 125 ° C Waterproof Interface: 1-wire Length of connecting wires: not less than 50 cm	
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	Thermistor – 1 pc Rated resistance: 100 Ohms (0 ° C) Measured temperature range: -20 ° C to +500 ° C (+/- 2.5 ° C) Accuracy: +/- 0.3 - 0.8 ° C (in the range 0-450 ° C) Length of connecting wires: not less than 50 cm Waterproof Barometer – 1 pc Supply voltage: 1.7-3.6 V Calibration: factory calibration Noise level: up to 0.2 Pa (1.7 cm) and 0.01 temperature Measured pressure range: from 300 hPa to 1100 hPa (9000 m to - 500 m) Accelerometer and gyroscope module – 1 pc Power supply: 3 - 5 V Gyroscope range: + 250 500 1000 2000 ° / s Accelerometer range: $\pm 2 \pm 4 \pm 8 \pm 16$ g I2C protocol Current sensor with analog output – 1 pc Supply voltage: from 3 to 36 V Measured current: from 0 A to 3 A Direction of current measurement: bidirectional CO2 sensor module – 1 pc Module supply voltage: 5 V Availability of digital and analog outputs Rain, moisture, snow sensor – 1 pc Power supply 3.3 - 5 V. Sensitive module dimensions: not less than 60 mm x 39 mm Comparator: Yes Liquid level sensor – 1 pc Operating voltage: 3 - 5 V Operating current: less than 20 mA Sensor type: analog Detection area: not less than 40 mm x 16 mm Hall sensor module – 1 pc Sensor type: unipolar Supply voltage: 4.5 - 24 V Heart rate sensor – 1 pc Supply voltage: 3 - 5 V Wire length: not less than 180 mm Wavelength (sensitivity peak): 565 nm	
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	Microwave motion sensor – 1 pc Supply voltage: 4 - 28 V Detection range: not less than 5 m Detection angle: not less than 120 degrees Transmitter power: up to 30 mW (nominal up to 20 mW) Delay time before trigger reset: 2 sec $\pm$ 30% Bend sensor – 1 pc Length: at least 2.2 inches (5.6 cm) Weight sensor (strain gauge) with control module – 1 pc Impedance: 1000 $\pm$ 50Ω Recommended voltage: within 5-10 V Maximum weight: not less than 2 kg Complex error margin: no more than 0.2% FS Pressure sensor – 1 pc Sensitive diameter: not less than 1.2 cm Resistance without pressure: more than 1 MO Weight detection range: not less than 100 g to 10 kg Width: 1.9 cm Impact sensor module – 1 pc Output type: contact tightened to the "+" power supply Number of outputs: 3 ("+", "-", sensor output) Vibration sensor – 1 pc Supply voltage: from 3.3 to 5 V Output: digital Comparator: Yes Tilt and vibration sensor module – 1 pc Comparator: Yes Operating voltage from 3.3 V to 5 V Availability of digital output Organizer for small details – 1 pc Material: plastic or wood Number of compartments: at least 10 Study guide for teacher on methods of implementation of STEM (STEAM) education – 1 pc Language: Ukrainian The study guide must contain (but not be limited to) the following topics: definition of STEM education, types of study projects, methods of establishing cooperation; project activity and technologies, etc.	
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	The study guide must contain full description of at least 6 (six) STEM projects Study guide for students on Scratch for Arduino programming fundamentals – 1 pc Language: Ukrainian Each topic of the manual should contain theoretical and practical material. Practical and / or laboratory works (not less than 2) are developed for each topic in accordance with one of the curricula for labor training, computer science, physics, chemistry, biology, mathematics, geography. Practical and / or laboratory work should include: goal setting, problem statement, information and computer model, description of a computer experiment. Contains description of the integrated educational project.	
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4. Addresses of delivery

No.	Lot No.	No. of position according to the specification	Product name	Quantity
1.	15, Stusa street, Kramatorsk, Donetsk oblast, 84300, Ukraine			
	Lot 1	2.1	STEM-kit with programmable electronic module and set of sensors for practical classes in biology, physics, chemistry and geography	7
2.	1, Miendielieieva street, Rubizhne, Luhansk oblast, 93000, Ukraine			
	Lot 1	2.1	STEM-kit with programmable electronic module and set of sensors for practical classes in biology, physics, chemistry and geography	9

5. Additional requirements:

- 1) Delivery of equipment/goods should be accompanied by manufacturer's warranty certificates. All necessary technical documentation must be provided by the supplier on the day of delivery. The warranty period for all equipment must be not less than 12 (twelve) months. All equipment must have official warranty service in Ukraine.
- 2) Delivery must be carried out during 60 (calendar) days from the contract signing date.
- 3) Equipment listed in Lot 1 (except for the study materials) must be supplemented with:
 - conclusion of the state sanitary-epidemiological examination, valid at the time of submission of the tender offer;
 - technical passport for products;
 - declaration of compliance with technical requirements;

- user instructions with photos and technical description of each component of the equipment set.
- 4) The study guide for students (teaching manual), specified in lot 1, must be described in the following documents:
 - extract (fragment) of the manual, which contains the content of the manual and a description of laboratory / practical work.
- 5) The teacher's study guide (teaching manual) specified in lot 1 must be described in the following documents:
 - extract (fragment) of the manual, which contains the contents of the manual.

6. Experience and Qualification Requirements / Evaluation method

- a) Officially registered company (for Ukrainian companies – should be registered in the territory controlled by the government of Ukraine).
- b) At least 2 years of experience in the field of supply of similar products per relevant lot.
- c) Minimum 2 recommendation letters from previous customers or copies of contract for provision of similar goods.

The Contract will be awarded to the technically compliant offer with the lowest prices.

7. Price offer and payment schedule

- The contract value must remain fixed for the duration of the contract.
- Applicants must include all costs associated with the work in their price quotation (such as the supply of all materials and equipment, transportation costs, staff salaries, office expenses, etc.).
- Payments should be arranged as follows:
 - 100% of the unit cost of the product payment is made by UNDP within 30 (thirty) calendar days from the date of respective position delivery and acceptance by UNDP and submission of originals of invoice, act of acceptance and tax invoice (if applicable).

Taking into account that purchase of goods will be carried out within the project of international technical assistance, price offers/invoices for payment must be presented without VAT.

Bidders must submit their price offers in the following format:

Lot No. 1. STEM equipment

No.	Product name and specification requirements	Quantity of units (pcs / pair)	Unit price, without VAT, currency	Total price, without VAT, currency
1	STEM-kit with programmable electronic module and set of sensors for practical classes in biology, physics, chemistry and geography	16		
	Cost of delivery	1		
Total, without VAT, currency				

Delivery Requirements

Delivery Requirements	
Delivery date and time	Bidder shall deliver the goods 60 (sixty) calendar days upon Contract signing.
Delivery Terms (INCOTERMS 2020)	DDP
Customs clearance (must be linked to INCOTERM)	☐ Not applicable Shall be done by: ☐ Name of organisation (where applicable) ☒ Supplier/bidder ☐ Freight Forwarder
Exact Address(es) of Delivery Location(s)	- 15, Stusa street, Kramatorsk, Donetsk oblast, 84300, Ukraine - 1, Miendielieieva street, Rubizhne, Luhansk oblast, 93000, Ukraine
Distribution of shipping documents (if using freight forwarder)	N/A
Packing Requirements	Packaging must comply with the rules for the safe transport of goods offered.
Training on Operations and Maintenance	☒ Equipment listed (except for the study materials) must be supplemented with: - conclusion of the state sanitary-epidemiological examination, valid at the time of submission of the tender offer; - technical passport for products; - declaration of compliance with technical requirements; - user instructions with photos and technical description of each component of the equipment set
Warranty Period	☒ Not less than 12 (twelve) months of official warranty service in Ukraine ☒ Delivery of equipment/goods should be accompanied by manufacturer's warranty certificates
After-sales service and local service support requirements	☒ All equipment must have official warranty service in Ukraine
Preferred Mode of Transport	Land

ANNEX 2: QUOTATION SUBMISSION FORM

Bidders are requested to complete this form, including the Company Profile and Bidder's Declaration, sign it and return it as part of their quotation along with Annex 3: Technical and Financial Offer. The Bidder shall fill in this form in accordance with the instructions indicated. No alterations to its format shall be permitted and no substitutions shall be accepted.

Name of Bidder:	Click or tap here to enter text.	
RFQ reference:	455-2021-UNDP-UKR-RFQ-RPP	Date: Click or tap to enter a date.

Company Profile

Item Description	Detail
Legal name of bidder or Lead entity for JVs	Click or tap here to enter text.
Legal Address, City, Country	Click or tap here to enter text.
Website	Click or tap here to enter text.
Year of Registration	Click or tap here to enter text.
Legal structure	Choose an item.
Are you a UNGM registered vendor?	☐ Yes ☐ No If yes, insert UNGM Vendor Number
Quality Assurance Certification (e.g. ISO 9000 or Equivalent) (If yes, provide a Copy of the valid Certificate):	☒ Yes ☐ No
Does your Company hold any accreditation such as ISO 14001 or ISO 14064 or equivalent related to the environment? (If yes, provide a Copy of the valid Certificate):	☒ Yes ☐ No
Does your Company have a written Statement of its Environmental Policy? (If yes, provide a Copy)	☒ Yes ☐ No
Does your organization demonstrate significant commitment to sustainability through some other means, for example internal company policy documents on women empowerment, renewable energies or membership of trade institutions promoting such issues (If yes, provide a Copy)	☒ Yes ☐ No

Is your company a member of the UN Global Compact	☒ Yes ☐ No			
Bank Information	Bank Name: Click or tap here to enter text. Bank Address: Click or tap here to enter text. IBAN: Click or tap here to enter text. SWIFT/BIC: Click or tap here to enter text. Account Currency: Click or tap here to enter text. Bank Account Number: Click or tap here to enter text.			
Previous relevant experience: 3 contracts				
Name of previous contracts	Client & Reference Contact Details including e-mail	Contract Value	Period of activity	Types of activities undertaken

Bidder's Declaration

Yes	No	
☐	☐	Requirements and Terms and Conditions: I/We have read and fully understand the RFQ, including the RFQ Information and Data, Schedule of Requirements, the General Conditions of Contract, and any Special Conditions of Contract. I/we confirm that the Bidder agrees to be bound by them.
☐	☐	I/We confirm that the Bidder has the necessary capacity, capability, and necessary licenses to fully meet or exceed the Requirements and will be available to deliver throughout the relevant Contract period.
☐	☐	Ethics: In submitting this Quote I/we warrant that the bidder: has not entered into any improper, illegal, collusive or anti-competitive arrangements with any Competitor; has not directly or indirectly approached any representative of the Buyer (other than the Point of Contact) to lobby or solicit information in relation to the RFQ ;has not attempted to influence, or provide any form of personal inducement, reward or benefit to any representative of the Buyer.
☐	☐	I/We confirm to undertake not to engage in proscribed practices, , 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 and we have read the United Nations Supplier Code of Conduct : https://www.un.org/Depts/ptd/about-us/un-supplier-code-conduct and acknowledge that it provides the minimum standards expected of suppliers to the UN.
☐	☐	Conflict of interest: I/We warrant that the bidder has no actual, potential, or perceived Conflict of Interest in submitting this Quote or entering a Contract to deliver the Requirements. Where a Conflict of Interest arises during the RFQ process the bidder will report it immediately to the Procuring Organisation's Point of Contact.
☐	☐	Prohibitions, Sanctions: I/We hereby declare that our firm, its affiliates or subsidiaries or employees, including any JV/Consortium members or subcontractors or suppliers for any part of the contract is not under procurement prohibition by the United Nations, including but not limited to prohibitions derived from the Compendium of United Nations Security Council Sanctions Lists and have not been suspended, debarred, sanctioned or otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization.
☐	☐	Bankruptcy: I/We have not declared bankruptcy, are not involved in bankruptcy or receivership proceedings, and there is no judgment or pending legal action against them that could impair their operations in the foreseeable future.

Yes	No	
☐	☐	Offer Validity Period: I/We confirm that this Quote, including the price, remains open for acceptance for the Offer Validity.
☐	☐	I/We understand and recognize that you are not bound to accept any Quotation you receive, and we certify that the goods offered in our Quotation are new and unused.
☐	☐	By signing this declaration, the signatory below represents, warrants and agrees that he/she has been authorised by the Organization/s to make this declaration on its/their behalf.

Signature: _____

Name: Click or tap here to enter text.

Title: Click or tap here to enter text.

Date: Click or tap to enter a date.

ANNEX 3: TECHNICAL AND FINANCIAL OFFER - GOODS

Bidders are requested to complete this form, sign it and return it as part of their bid along with Annex 2: Quotation Submission Form. The Bidder shall fill in this form in accordance with the instructions indicated. No alterations to its format shall be permitted and no substitutions shall be accepted.

Name of Bidder:	Click or tap here to enter text.	
RFQ reference:	455-2021-UNDP-UKR-RFQ-RPP	Date: Click or tap to enter a date.

Table 1. Conformity to the Specification

#	Technical requirements (Features at least)	Conformity (Yes/No)	Offered Brand, Model and Exact characteristics <i>(Technical characteristics should not be less / worse than those listed in the assignment)</i>
1.	STEM-kit with programmable electronic module and set of sensors for practical classes in biology, physics, chemistry and geography <u>Complete set must include:</u> Mobile platform with integrated manipulator – 1 pc Weight of the transported cargo: not less than 1 kg; Continuous operation time: not less than 2 hours; Number of mobility steps: not less than 3; Built-in microcontroller with the following characteristics: - microcontroller: ATmega328; - USB-UART adapter (ATMega16u2); - additional drivers not required; The mobile platform with the integrated manipulator must include: - batteries - battery storage box Battery requirements: - type: Li-ion batteries with protection board - nominal capacity: not less than 3200 mAh Moving elements must be put in motion using servomotors Servomotors must be controlled by the I2C protocol. Interfaces for connecting additional devices: analog, digital, I2C, SPI. Microcontroller Arduino Uno – 2 pcs Type: ATmega328; Adapter type: USB-UART adapter (ATMega16u2), installation of additional drivers not required; Number of digital inputs / outputs: 14 (incl 6 PWM) Number of analog inputs: 6 Flash program memory: not less than 32Kb Operational memory: not less than 2Kb Body material: acrylic body		

	Educational shield – 1 pc Adapted to the S4A learning environment by using the S4A-compatible ports. The educational shield must contain the following elements: Color LEDs: green – 2; red color - 2, yellow - 1, blue – 1; Photoresistive light sensor: 1 Clock buttons: 2 Piezzo buzzer: 1; RGB LED: 1; Number of servomotors connected simultaneously: 3 Accessible digital and analog ports of the controller. Battery – 2 pcs Type: Li-ion with protection board Nominal capacity: not less than 3200 mAh Maximum discharge current: not less than 4.8 A Nominal voltage: not less than 3.6 V Minimum voltage: not less than 2.75 V Maximum voltage: not less than 4.2 V Separate storage box: Yes Battery chargers: Yes Battery compartment – 1 pc Compartment for two batteries (type Li-ion with protection board) with series connection and available power connector 2.1x5.5 mm Breadboard power supply module 5V/3.3V – 1 pc Input voltage: DC 6 ~ 15V Output voltage to USB: 5V Output voltage on contacts: 3.3V / 5V Output current on USB: 500mA Output current on contacts: 1A-5V / 800mA-3.3V Overpadding protection Converter – 1 pc Converter type: step-down Input voltage: 5-48 V Output voltage: 0.5 - 40 V Maximum load current: not less than 3 A Voltage step-down converter with regulation of current and voltage – 1 pc Type: step-down voltage converter with output current and voltage limitation without galvanic isolation Conversion mode: asynchronous Input voltage: 8-36 V Output voltage: 1.25-32 V Minimum difference between input and output voltages: no more than 0.3 V Output current: adjustable, not less than 5 A Solar panel – 1 pc Operating voltage: not less than 5.5 V		
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	Operating current: not less than 170 mA Solderless breadboard – 2 pcs Number of points: 400 Number of power connection lines: 2 Self-adhesive surface on the reverse side Set of breadboard jumper wires, type M-M – 40 pcs Length: 200mm Set of breadboard jumper wires, type F-M – 40 pcs Length: 200mm Set of breadboard jumper wires, type F-F – 40 pcs Length: 200mm Set of jumper wires for Arduino – 1 pc 240mm – 5 pcs 200mm – 5 pcs 150mm – 8 pcs 110mm – 47pcs Infrared remote control and infrared receiver – 1 pc Maximum distance: not less than 8 m Effective angle: at least 60 degrees Number of control buttons: not less than 17 16-button membrane keyboard – 1 pc Flex length: not less than 86 mm Connector: 2.54mm pitch Maximum voltage: not more than 35 V, 100 mA Insulation resistance: not less than 100 MOhm, 100 V Sharpness of contacts: not more than 5 msec Lifetime: at least 1 million clicks Joystick – 1 pc Operating voltage: 5 V Availability of X-axis control Availability of Y-axis control Button: Yes Set of buttons with cap – 1 pc Contact resistance: not less than 100 mOhm Operating voltage: no more than 12V / 100 mA Mounting method: surface Lifetime: at least 100,000 times Size: 12 mm Number of buttons in the set: at least 5 Button caps of different colors Sensor module – 1 pc Number of channels: not less than 4 LED pressure indication is available Operating voltage: 2.4 V ~ 5.5 V RFID module – 1 pc		
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	Supply voltage: not more than 3.3 V Operating frequency: 13.56 MHz Reading range: 0 ~ 60 mm Interface: SPI, maximum transfer rate not less than 10Mbps Reading and writing RFID tags Includes: RFID module, access card, access keychain Real Time Clock module – 1 pc Thermal compensation and stride correction Counter of seconds, minutes, hours, days of the week, months and years with a calendar with a correction of the leap year until 2100 Stability of the generator: ± 2 ppm in the temperature range from 0 ° C - + 40 ° C Stability of the generator: $\pm 3,5$ ppm in the temperature range from -40 ° C - + 85 ° C Accuracy of internal digital temperature sensor ± 3 ° C Clock accuracy correction register Programmable output of rectangular pulses 2 alarm clocks with the possibility of adjustment 2 I2C bus modes: Standard (100kHz) and Fast (400kHz) Operating supply voltage: from 3.0 V to 5.5 V Battery included Relay module 5 V 10 A with optocoupler – 1 pc Maximum switching current of the relay: not less than 10 A at 250 V Equipped with LED that indicates the current status of the relay contacts Encoder module – 1 pc Discreteness: at least 20 steps per rotation Slider variable resistor module – 1 pc Voltage: 3.3-5 V Signal: analog Resistance: not less than 10K Variable resistor – 2 pcs Nominal resistance: 10 kOhm Max. voltage: 150 V AC Nominal power: not less than 0.125 W Bluetooth module – 1 pc Communication protocol: Bluetooth Specification v2.0 + EDR Frequency: GFSK Sending power ≤ 4dBm, Class 2 Reception power ≤ -84dBm at 0.1% BER Asynchronous speed: 2.1Mbps (Max) / 160 kbps, Synchronous speed: 1Mbps / 1Mbps Security authentication and encryption Bluetooth serial port profile Support for both slave and master mode		
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Wi-fi module – 1 pc Protocol: WiFi 802.11 b / g / n Support for STA / AP / STA + AP modes Built-in TCP / IP protocol stack with support for multiple client connections (up to 5) D0 ~ D8, SD1 ~ SD3: can be used as GPIO, PWM, IIC, etc. Output current: 15 mA AD0: 1 ADC output Power supply: 4.5 - 9V (10V maximum) USB power supply with debugging interface Transmission speed: 110-460800 baud Support for UART / GPIO data interfaces Reflashing from the cloud or via USB Ethernet shield – 1 pc Operating voltage: 5 V Connection speed: 10/100 Mbps Compatible with 802.3 standard Support for TCP, UDP, IPv4, ICMP, ARP, IGMP and PPPoE protocols At least 16 Kbytes of internal data buffer Interaction with the controller via the SPI interface Integrated card reader: Yes MicroSD card 16GB Class 10 with adapter – 1 pc Fully complies with the standard SD 2.0 Compatible with card readers and devices that support MicroSDHC Compatible with Secure Digital Music Initiative (SDMI) Recording speed: at least 15 MB / sec Read speed: at least 80 MB / sec Multimeter – 1 pc Display: LCD 50x20 mm Power supply: Krona 9V battery, available in the set Constant voltage (DC), V: 200m / 2000m / 20/200/1000 Alternating voltage (AC), V: 200/750 DC, A: 2000μ / 20m / 200m / 10 Resistance, Ohm: 2000K / 200K / 20K / 2000/200 Possibility of testing diodes, transistors The multimeter has a built-in generator and a buzzer LED panel for visual indication of the output state of the microcontroller – 1 pc Supply voltage: 3.3-12 V Number of LEDs: not less than 6 pcs Type of indicators: common cathode Number of PIN connectors: at least 7 Schmitt Inverter Trigger 74HC14 – 1 pc Supply voltage: from 2V to 6V Output load capacity: 10 LSTTL inputs Static current consumption: 20 μA Signal delay time: 11 μs Output current: 4 mA at 5V		
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Input current: less than 1 μA Housing type: DIP-14 Shear register 74HC595N – 4 pcs Housing type: PDIP-16 RoHS: Yes Technology: CMOS Operating voltage (typical): 2.5 / 3.3 / 5V Operating voltage (min.): 2V Operating voltage (max.): 6V Operating temperature range: -40 ... +85C Number of pins: 16 Set of resistors 0.25W – 1 pc 10 Ω – 20pcs 22 Ω – 20pcs 47 Ω – 20pcs 100 Ω – 20pcs 150 Ω – 20pcs 200 Ω – 20pcs 220 Ω – 20pcs 270 Ω – 20pcs 330 Ω – 20pcs 470 Ω – 20pcs 510 Ω – 20pcs 680 Ω – 20pcs 1 kΩ – 20pcs 2 kΩ – 20pcs 2.2 kΩ – 20pcs 3.3 kΩ – 20pcs 4.7 kΩ – 20pcs 5.1 kΩ – 20pcs 6.8 kΩ – 20pcs 10 kΩ – 20pcs 20 kΩ – 20pcs 47 kΩ – 20pcs 51 kΩ – 20pcs 68 kΩ – 20pcs 100 kΩ – 20pcs 220 kΩ – 20pcs 300 kΩ – 20pcs 470 kΩ – 20pcs 680 kΩ – 20pcs 1 MΩ – 20pcs LCD display – 1 pc I2C interface 16 x 2 format Power supply: not less than 5V OLED display – 1 pc Screen size: at least 0.96 " Screen type: OLED 4-pin supply voltage: 3.3-6 V Display resolution: at least 128 x 64 Availability of OLED module driver		
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	Viewing angle: not less than 160 degrees Availability of storage box Passive buzzer – 1 pc Power supply 3.3 - 5 V Buzzer – 1 pc Power supply 3.3 - 5 V LED matrix – 1 pc Supply voltage: 1.8-2.3 V Array size: at least 8 x 8 points The size of the matrix: 37 x 37 mm Nominal pixel current: 20 mA Output: anode Module of 4-point LED matrices – 1 pc Power supply: 5 V Complete set: 8x8 LED matrix Number of matrices: not less than 4 Soldered printed circuit board MAX7219 chip 10-segment 4-color progress bar – 1 pc 10 LEDs in one housing, each with its own anode and cathode. 4 colors: 2 red, 3 yellow, 4 green and 1 blue 7-segment 1-digit red LED indicator – 4 pcs RoHS: Yes Digit height: not less than 0.56 inches Output: cathode 7-segment 4-digit LED indicator – 1 pc Separators: vertical colon and decimal points Display type: 7-segment Number of digits: not less than 4 Digit height: not less than 0.56 inches Output: cathode Set of colored LEDs – 1 pc Red: 3 mm – not less than 10 pieces 5 mm – not less than 10 pieces Yellow: 3 mm – not less than 10 pieces 5 mm – not less than 10 pieces Green: 3 mm – not less than 10 pieces 5 mm – not less than 10 pieces Blue: 3 mm – not less than 10 pieces 5 mm – not less than 10 pieces White: 3 mm – not less than 10 pieces		
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5 mm – not less than 10 pieces Rated current: 20 mA LED-light - 4 pcs RGB type General cathode Diameter - not less than 5 mm The lens is matte Circle with LEDs – 1 pc Number of LEDs: not less than 12 Supply voltage: 4-7 V DC LED type: RGB WS2812 Interface: Single-wire consecutive Servomotor – 1 pc Speed without load: 0.12 sec / 60 degrees when powered by 4.8V Torque: 2 kg / cm Temperature range: 0 to + 50°C Dead zone width: 4 microseconds Operating supply voltage: 3.5-5 V Current consumption in motion: 50-80 mA Current consumption in stand-by: 5-10 mA Angle of rotation: 180 degrees Dimensions: 3.3 cm x 3 cm x 1.3 cm Stepper motor – 1 pc Nominal supply voltage: 5 V (direct current) Number of phases: 4 Number of strides: 64 Number of microstrides: 4096 Stride angle: 5.625 degrees Nominal frequency: 100 Hz Nominal resistance of coil (at 25 degrees): 50 Ohms Peak current of one coil: 320 mA Idling frequency (clockwise): 600 Hz Idling frequency (counterclockwise): 1000 Hz Torque (clockwise, at a frequency of 120 Hz): 34.3 N/m Pull in torque: 343 g/cm Electrical safety class: A Noise level <40dB Stepper motor driver – 1 pc Compatibility with 5V and 12V unipolar motors. Compatibility with standard Arduino Stepper library Number of light diodes: 4 (1 per channel) Micro electric motor – 2 pcs Supply voltage: 3-6 V Speed without load: at least 9000 ± 10% RPM Two-channel motor driver – 1 pc Power supply of motors: not less than 2.5 V - 15 V Operating voltage: from 2.7 V to 5.5 V Maximum motor current: 1.2 A (average) / 3.2 A (peak)		
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	Fan – 1 pc Engine type: brushless Dimensions: not less than 30 x 30 x 10 mm Nominal voltage: 5 V Resource: at least 35,000 hours Universal sound sensor – 1 pc Analog voltage output from the microphone Digital output of the threshold comparator Comparator: Yes Power indicator: Yes Digital output status indicator: Yes Operating voltage: 4 - 6 V Ultrasonic distance sensor – 1 pc Operating voltage 3.8 - 5.5 V The maximum distance: not less than 1500 mm The minimum distance: 0 cm Resolution: not less than 3 mm Pulse width: 10 µs Angle: 15 degrees Sensor mount: Yes Light sensor – 1 pc Sensitive element: photoresistor Adjustment of a threshold of operation by the variable resistor Operating voltage: from 3.3 V to 5 V Comparator: Yes Digital and analog outputs: Yes Infrared motion sensor – 1 pc Detection range: within at least 0-7 m Angle of operation: not less than 110 ° at a distance of up to 7 m Supply voltage: 4.5 - 12 V Delay time is not worse than 0.3 - 300 seconds with the possibility of adjustment Method of operation: repetitive and non-repetitive switching Infrared distance sensor – 1 pc Operating voltage: 4.5-5.5 V Output signal type: analog Average time for updating information for output: no more than 16.5 ms Measuring distance: not less than 10 to 80 cm Interference sensor – 1 pc Obstacle detection distance: not worse than 2-30 cm Operating voltage: 3.3 to 5 V Comparator: Yes Line sensor – 2 pcs Supply voltage: 3.3-5 V		
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	Fire sensor module – 1 pc Definition wavelength: 760nm ~ 1100 m. Operating voltage: 3.3 - 5 V Comparator: Yes Trigger angle: up to 60 degrees Detection distance: not less than 80 cm Infrared thermo module – 1 pc Operating voltage: from 3V to 5V Comparator: Yes Range of the measured temperature: at least 20 to 80 ° C Built-in digital output and supply voltage status indicator Digital and analog outputs Color sensor – 1 pc Color determination distance: not less than 10 mm Availability of high-quality conversion of light intensity into frequency Availability of connection directly to the microcontroller Operating voltage: 3 - 5 V RGB sensor and gesture sensor module – 1 pc RGBC light sensor, proximity and gesture detector with IR indicator in the optical module Detection distance: not less than 100 mm Sensitivity to different directions of movement Measurement of the direction and speed of approach and gestures Factory calibration Humidity and temperature sensor module – 1 pc Supply voltage: 3-5 V Measuring humidity range: not worse than within 20-90% RH ± 5% (max.) Measuring temperature range: not less than 0-50 °C ± 2% (max.) Comparator: Yes Soil moisture sensor (hygrometer) – 1 pc Measuring element: metallized probe Comparator: Yes Sensor outputs: digital and analog Sensor supply voltage: 3.3 - 5 V Soil moisture sensor – 1 pc Humidity measurement method: capacitive Output type: analog Supply voltage: from 3.3 to 5.5 V Output voltage: from 0 V to 3.0 V Temperature sensor – 1 pc Operating voltage: from 3 V to 5.5 V Accuracy: ± 0.5 ° C in the range -10 ° C to + 85 ° C Operating temperature range: from -55 to 125 ° C		
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	Waterproof Interface: 1-wire Length of connecting wires: not less than 50 cm Thermistor – 1 pc Rated resistance: 100 Ohms (0 ° C) Measured temperature range: -20 ° C to +500 ° C (+/- 2.5 ° C) Accuracy: +/- 0.3 - 0.8 ° C (in the range 0-450 ° C) Length of connecting wires: not less than 50 cm Waterproof Barometer – 1 pc Supply voltage: 1.7-3.6 V Calibration: factory calibration Noise level: up to 0.2 Pa (1.7 cm) and 0.01 temperature Measured pressure range: from 300 hPa to 1100 hPa (9000 m to - 500 m) Accelerometer and gyroscope module – 1 pc Power supply: 3 - 5 V Gyroscope range: + 250 500 1000 2000 ° / s Accelerometer range: $\pm 2 \pm 4 \pm 8 \pm 16$ g I2C protocol Current sensor with analog output – 1 pc Supply voltage: from 3 to 36 V Measured current: from 0 A to 3 A Direction of current measurement: bidirectional CO2 sensor module – 1 pc Module supply voltage: 5 V Availability of digital and analog outputs Rain, moisture, snow sensor – 1 pc Power supply 3.3 - 5 V. Sensitive module dimensions: not less than 60 mm x 39 mm Comparator: Yes Liquid level sensor – 1 pc Operating voltage: 3 - 5 V Operating current: less than 20 mA Sensor type: analog Detection area: not less than 40 mm x 16 mm Hall sensor module – 1 pc Sensor type: unipolar Supply voltage: 4.5 - 24 V Heart rate sensor – 1 pc Supply voltage: 3 - 5 V Wire length: not less than 180 mm Wavelength (sensitivity peak): 565 nm Microwave motion sensor – 1 pc		
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	Supply voltage: 4 - 28 V Detection range: not less than 5 m Detection angle: not less than 120 degrees Transmitter power: up to 30 mW (nominal up to 20 mW) Delay time before trigger reset: 2 sec $\pm$ 30% Bend sensor – 1 pc Length: at least 2.2 inches (5.6 cm) Weight sensor (strain gauge) with control module – 1 pc Impedance: 1000 $\pm$ 50Ω Recommended voltage: within 5-10 V Maximum weight: not less than 2 kg Complex error margin: no more than 0.2% FS Pressure sensor – 1 pc Sensitive diameter: not less than 1.2 cm Resistance without pressure: more than 1 MO Weight detection range: not less than 100 g to 10 kg Width: 1.9 cm Impact sensor module – 1 pc Output type: contact tightened to the "+" power supply Number of outputs: 3 ("+", "-", sensor output) Vibration sensor – 1 pc Supply voltage: from 3.3 to 5 V Output: digital Comparator: Yes Tilt and vibration sensor module – 1 pc Comparator: Yes Operating voltage from 3.3 V to 5 V Availability of digital output Organizer for small details – 1 pc Material: plastic or wood Number of compartments: at least 10 Study guide for teacher on methods of implementation of STEM (STEAM) education – 1 pc Language: Ukrainian The study guide must contain (but not be limited to) the following topics: definition of STEM education, types of study projects, methods of establishing cooperation; project activity and technologies, etc. The study guide must contain full description of at least 6 (six) STEM projects Study guide for students on Scratch for Arduino programming fundamentals – 1 pc		
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	Language: Ukrainian Each topic of the manual should contain theoretical and practical material. Practical and / or laboratory works (not less than 2) are developed for each topic in accordance with one of the curricula for labor training, computer science, physics, chemistry, biology, mathematics, geography. Practical and / or laboratory work should include: goal setting, problem statement, information and computer model, description of a computer experiment. Contains description of the integrated educational project.		
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Table 2. Financial offer for the supply of goods in accordance with the technical specification and requirements

No.	Product name and specification requirements	Quantity of units (pcs / pair)	Unit price, without VAT, currency	Total price, without VAT, currency
1	STEM-kit with programmable electronic module and set of sensors for practical classes in biology, physics, chemistry and geography	16		
	Cost of delivery	1		
Total, without VAT, currency				

Dear Partners!

The UN Office in Ukraine kindly informs you, that the purchase of goods and services, announced in the UN Office Tenders, is conducted within the framework of international technical assistance project.

Provisions of the Tax Code of Ukraine (paragraph 197.11) foresee the VAT tax exemption for operations, financed by material and technical assistance.

The procedure for obtaining the tax exemption right for operations, performed in the framework of international technical assistance projects, is regulated by the Decree #153 of the Cabinet of Ministers of Ukraine dated February 15, 2002.

In case you already have the right to apply this VAT allowance, on the date of UNDP prepayment receipt you should prepare and register a tax invoice (hereinafter - TI) in the United Register of Tax Invoices (URTI), filled in as follows:

- the column "Comprised on the operation, exempted from taxation" on the upper left part - with the mark "Without VAT";
- Section A of the TI table section (lines I-X) should contain the summarizing data on TI transactions, namely: line I - the total amount to be paid, including VAT; line IX - the total volume of goods and services delivered. Lines II-VIII of section A are not filled;
- in column 2 of section B – supplier's (seller's) services nomenclature;
- in section 3.3 of section B - service code according to the SCPS. Box 3.3 should be filled in at all stages of the services delivery;
- in columns 4 and 5 - unit of services measurement;

- in column 6 - quantity (volume) of services delivery;
- in column 7 - the price of the service unit supply, excluding VAT;
- in column 8 - VAT rate code 903;
- in column 9 – tax allowance code according to the Handbook of other tax benefits, approved by the SFS as of the date of TI submission - "14060523".
- in column 10 - supply volume, excluding VAT (prepayment amount). Detailed instructions to be found in the materials "Tax invoice - 2017: instruction on filling out" and "New tax invoice in the samples."

Credit against VAT tax, applied on the materials purchase for the relevant construction works performance, cannot be compensated as per the paragraph #198.5 of Tax Code of Ukraine. According to the Tax Code paragraph #198.5, goods and services supply operations, exempted from VAT based on the Tax Code paragraph #197.11, the rules for calculating tax liabilities do not apply.

Using the materials bought with VAT, there is no need to compensate the credit against VAT, as well as no need to accrue tax liabilities.

Considering all mentioned above, you are kindly asked to submit your tender applications / invoices for payment without VAT, referring to the Ukrainian legislation provisions, stated in the mentioned regulatory acts.

Should you have any additional questions, please contact the offices of the State Fiscal Service of Ukraine at the place of your enterprise registration for additional clarifications of Article 52 of the Tax Code of Ukraine.

Table 3. Compliance with Requirements

	You Responses		
	Yes, we will comply	No, we cannot comply	If you cannot comply, pls. indicate counter - offer
Minimum Technical Specifications	☐	☐	Click or tap here to enter text.
Delivery Term (INCOTERMS) 1. DDP – 15, Stusa street, Kramatorsk, Donetsk oblast, 84300, Ukraine 2. DDP – 1, Miendielieieva street, Rubizhne, Luhansk oblast, 93000, Ukraine	☐	☐	Click or tap here to enter text.
Delivery Lead Time (Delivery of equipment must be carried out within 60 (sixty) calendar days from PO/Contact signature date)	☐	☐	Click or tap here to enter text.
The warranty period for all equipment must be not less than 12 (twelve) months	☐	☐	Click or tap here to enter text.
Validity of Quotation (min. 60 days)	☐	☐	Click or tap here to enter text.
Payment terms	☐	☐	Click or tap here to enter text.

Other Information:

Estimated weight/volume/dimension of the Consignment:	Click or tap here to enter text.
Country/ies of Origin: (if export licence required this must be submitted if awarded the contract)	Click or tap here to enter text.

I, the undersigned, certify that I am duly authorized to sign this quotation and bind the company below in event that the quotation is accepted.	
<i>Exact name and address of company</i> Company NameClick or tap here to enter text. Address: Click or tap here to enter text. Click or tap here to enter text. Phone No.:Click or tap here to enter text. Email Address:Click or tap here to enter text.	Authorized Signature: Date:Click or tap here to enter text. Name:Click or tap here to enter text. Functional Title of Authorised Signatory:Click or tap here to enter text. Email Address: Click or tap here to enter text.