Project "Improvement and Extension of the Services of the National System of Science, Technology and Technological Innovation"

**Sub Project Name:**

**Development of an air quality monitoring system in urban areas with low cost real-time measurement modules and Artificial Intelligence techniques**

REQUEST FOR QUOTATION

|  |
| --- |
| **COMPARISON OF PRICES CP Nº 005-2019-PUCP** |

**Contract name:** Air quality sensors for Qhawax measurement modules

**2019**

**1. Letter of Request for Quotation - Acquisition of Assets and Services other than Consulting**

Price Comparison Method

Place and date: ………………………………….

[Indicate the full legal name and address of the Guest to submit offers]

Sirs / Ladies

Our entity has received competitive funds to partially finance the cost of the Sub project "Restoration and conservation of archaeological pieces using deep learning and convolutional autoenconders on graphs", and it is proposed to use part of the funds to finance the acquisition of the property indicated in the Annex No. 1. In this regard, a quotation is invited for the supply of the following assets and related services.

1. Your quote (s) must be accompanied by the appropriate technical documentation, catalogs and any other printed material that is relevant for the quotation of the assets.

2. The quote (s) must be in accordance with the terms and conditions for the Purchase Order of the supply of the assets established in Annex 1.

3. If a Bidder withdraws its quotation during the period of validity and / or does not accept the award of the Purchase Order, it will be excluded from the list of Bidders of the Project for a period of six (06) months.

4. The deadline to submit the quotation will be until March 29 until 5 pm. The offeror may submit his / her quotation in a sealed envelope at the following address: Av. Universitaria 1801, San Miguel - Lima, Logistics Office, or to email address [logistica-compras@pucp.pe](mailto:logistica-compras@pucp.pe)

5. The buyer, in case of not having obtained enough confirmations of participation (at least three), may add guests and extend the date of opening of the quotes in order to ensure said amount of contributions.

6. The purchase method corresponds to lump sum and the quote will be presented in Soles, according to the indicated in Annex N ° 2.

Cordially,

**............................................................**

**2. Fraud and Corruption Clause**

1.16 It is the Bank's policy to require that Borrowers (including beneficiaries of loans granted by the institution), bidders, suppliers, contractors and their agents (whether or not they have been declared), subcontractors, sub-consultants, service providers or service providers. inputs, and any other associated personnel, observe the highest ethical standards during the contracting process and the execution of contracts financed by the Bank1. For the purposes of compliance with this policy, the Bank:

a) defines as follows, for the purposes of this provision, the expressions indicated below:

i. "Corrupt practice" means the offer, supply, acceptance or request, directly or indirectly, of anything of value in order to improperly influence the performance of another person; two

ii. ) "Fraudulent practice" means any act or omission, including a misrepresentation of the facts that, knowingly or recklessly, misleads or attempts to mislead another person in order to obtain a financial or other benefit, or to avoid an obligation; 3

iii. ) "Collusive practice" means an arrangement of two or more persons designed to achieve an improper purpose, including improperly influencing the actions of another person;

iv. "Coercive practice" means the damage or threats to harm, directly or indirectly, any person, or the properties of a person, to improperly influence their actions;

v. "Obstruction practice" means

(aa) the deliberate destruction, falsification, alteration or concealment of material evidence relating to an investigation or providing false testimony to investigators to materially prevent an investigation by the Bank of allegations of corrupt, fraudulent, coercive or collusive practices; and / or the threat, persecution or intimidation of any person to prevent him from disclosing what he knows about matters relevant to the investigation or carrying out the investigation, or

(bb) actions aimed at materially preventing the exercise of the Bank's rights to be inspected and audited in accordance with paragraph 1.16 (e), mentioned below.

b) reject any award proposal if it determines that the bidder selected for said award or its personnel, its agents and sub-consultants, subcontractors, suppliers or their employees have participated, directly or indirectly, in corrupt, fraudulent, collusive, coercive or of obstruction to compete for the contract in question;

c) declare the acquisition flawed and cancel the portion of the loan assigned to a contract if at any time it determines that the representatives of the Borrower or of a beneficiary of any part of the loan funds have participated in corrupt, fraudulent, collusive, coercive practices or of obstruction during the procurement process or the implementation of said contract, without the Borrower having adopted timely and appropriate measures that the Bank considers satisfactory to correct the situation, addressed to said practices when they occur, including not having informed the Bank in a timely manner. having known such practices;

d) sanction a firm or person, at any time, in accordance with the sanctions regime of the Bank, 6 including declaring said signature or publicly ineligible person, indefinitely or for a determined period to: (i) be awarded a a contract financed by the Bank and (ii) that a subcontractor7, consultant, supplier or service provider of a firm that otherwise would be eligible for a contract financed by the Bank will be nominated.

e) it will require that, in contracts financed with a Bank loan, a clause be included that requires that Bidders, suppliers and contractors and their subcontractors their agents, personnel, consultants, suppliers of assets or services must allow the Bank to review all the accounts, files and other documents related to the presentation of bids and the fulfillment of the contract and subject them to a verification by auditors designated by the Bank.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. In this context, any action to influence the process of contracting or executing a contract to acquire an illegitimate advantage is improper.

2. For the purposes of this Subparagraph, "person" refers to a public official who acts in relation to the contracting process or execution of the contract. In this context, "public official" includes World Bank staff and employees of other organizations that take or review decisions related to contracts.Anexo N° 1

3. For the purposes of this Subparagraph, "person" means a public official; the terms "benefit" and "obligation" refer to the contracting process or the execution of the contract; and the term "action or omission" should be aimed at influencing the contracting process or the execution of a contract.

4. For the purposes of this Subparagraph, "persons" refers to the participants in the hiring process (including public officials) who attempt, by themselves or through another person or entity not participating in the process, to establish prices for offer artificial and non-competitive levels.

5. For the purposes of this Subparagraph, "person" refers to a participant in the contracting process or in the execution of a contract.

6. A firm or person may be declared ineligible to be awarded a contract financed by the Bank: (i) upon completion of a sanction procedure against it, in accordance with the Bank's sanctions regime, which includes the joint disbarment as agreed with other International Financial Institutions including the Multilateral Development Banks, and the corporate sanctions of the World Bank Group for fraud and corruption cases in the administration of acquisitions; and (ii) when it is sanctioned with temporary suspension or early temporary suspension in relation to a sanction procedure in process. See footnote 14 of paragraph 8 in Appendix 1 of these Rules.

7. A subcontractor, consultant, manufacturer and / or supplier of products or services (different names are used according to the bidding document used) nominated is one that has been: (i) included by the bidder in his application for prequalification or offer because it provides the key and specific experience and knowledge that allows the bidder to meet the qualification criteria for a particular bid; or (ii) nominated by the borrower.

**Anexo N° 1**

DESCRIPTION OF THE ASSET:

• Air quality sensors for Qhawax measurement modules

TECHNICAL SPECIFICATIONS OF ASSETS

|  |  |
| --- | --- |
| **General issues** |  |
| Denominación y descripción general del bien | Sensores de medición de gases(CO, NO2, SO2, O3, H2S) y material particulado (PM2.5 y PM10) |
| Name and general description of the good to be acquired, materials to be used, model, type, size and blueprints. | measurement gas sensors (CO, NO2, SO2, O3 & H2S) and particulate matter (PM2.5 & PM10) |
| Composición o accesorios que forman parte de la compra/ Composition or accessories included in the purchase: | |
| Accesorio 1 / Accessory 1 | 14 sensores electroquímicos de monóxido de carbono (CO) + 14 tarjetas de acondicionamiento de señal / 14 electrochemical Carbon Monoxide (CO) sensors + 14 signal conditioning boards |
| Accesorio 2 / Accessory 2 | 14 Sensores electroquímicos de dióxido de nitrogeno (NO2) + 14 tarjetas de acondicionamiento de señal / 14 electrochemical Nitrogen Dioxide (NO2) sensors + 14 signal conditioning boards |
| Accesorio 3 / Accessory 3 | 14 sensores electroquímicos de dióxido de azufre (SO2) + 14 tarjetas de acondicionamiento de señal / 14 electrochemical Sulfur Dioxide (SO2) sensors + 14 signal conditioning boards |
| Accesorio 4 / Accessory 4 | 14 sensores electroquímicos de ozono (O3) + 14 tarjetas de acondicionamiento de señal / 14 electrochemical Ozone (O3) sensors + 14 signal conditioning boards |
| Accesorio 5 / Accessory 5 | 14 sensores electroquímicos de sulfuro de hidrógeno (H2S) + 14 tarjetas de acondicionamiento de señal / 14 electrochemical Hydrogen Sulfide (H2S) sensors + 14 signal conditioning boards |
| Accesorio 6 / Accessory 6 | 14 sensores opticos de material particulado (PM2.5 y PM10) / 14 optical particulate matter sensors (PM2.5 and PM10) |
| Accesorio 7 / Accessory 7 | 14 cables de comunicación del sensor de material particulado/ 14 particle matter sensor communication cables |
| Función del bien | Sensar parametros de contamientacion ambiental |
| Purpose of the merchandise | To mesure environmental pollution parameters |
| Resumen de uso en el proyecto PUCP | Componentes del módulo de medición de calidad del aire para sensado de parametros ambientales |
| Summary of use in the PUCP project | Components of the air quality monitor for sensing environmental parameters |
| **Hardware and software specifications (if any)** |  |
| Define las especificaciones del Hardware y Software /Define the specifications for the hardware and software: | |
| Nombre/name 1: Sensores electroquímicos de gases (CO, NO2, SO2, O3, H2S) | Función/Purpose: Sensar CO, NO2, SO2, O3 y H2S/ Sensing CO, NO2, SO2, O3 and H2S. |
| Nombre/name 2: Tarjetas de acondicionamiento de señales para sensores electroquimicos | Función/Purpose: Traducir flujo de electrones a voltios/ Convert electron flow to volts. |
| Nombre/name 3: Sensores opticos de material particulado (PM2.5 y PM10) | Función/Purpose: Sensar material particulado mediante haces de luz infrarrojos/ Detection of particulate matter by infrared light rays. |
| Nombre/name 4: Cables de comunicación para sensores de material particulado | Función/Purpose: Canal de comunicación SPI para lectura del sensor de material particulado/ SPI communication channel for reading the particulate matter sensor |
| **Main technical parameters** |  |
| Capacity, strength and others that can be measured, equipment compatibility with existing facilities or equipment, product and package environmental Impact, Safety Sheet | |
| Parametro/ Parameter 1: En sensores electroquímicos de gases / For electrochemical gas sensors | Valor o rango/ Value or Range : Up to 1000ppm for CO, 100ppm for H2S, 20ppm for NO2, 20ppm for O3, 100ppm for SO2 |
| Parametro/ Parameter 2: Para sensores de material partiulado / For particulate matter sensors | Valor o rango/ Value or Range : PM2.5, PM10 |
| Tolerancias de los parámetros, expresados en rangos/Parameter tolerances, expressed in ranges: | |
| Parametro/ Parameter 1: Ruido para sensores electroquímicos / Noise for electrochemical gas sensors | Valor o rango/ Value or Range : Less than 4ppb for CO, 1ppb for H2S, 15ppb for NO2, 15ppb for O3, 5ppb for SO2 |
| La Norma Técnica Nacional o Internacional que define el sistema de calidad aplicable/ Domestic or International Technical Standard that defines the applicable quality system: | |
| Nombre/name 1: Comunicacion para sensores de material particulado / Communication for particulate matter sensors | Función/Purpose: Comunicación SPI / Comunication SPI |
| **Required Guarantee / Technical Service** |  |
| Indicate how long the equipment shall be covered by guarantee. Foresee the need for spare parts during the estimated useful life in case of an equipment | 12 MONTHS OF GUARANTEE |
| Indicate if a minimum useful life is required for the equipment, in years | 2 YEARS OF USEFUL LIFE |
| **Product verification in the supplier’s workshop, when necessary** |  |
| To indicate if the functioning will have to be proved before the dispatch to Peru. If is yes, indicates which will be the test and what evidence will be necessary. | CALIBRATION CERTIFICATE |
| **Packing, marking and transportation** |  |
| To indicate if the equipment will have special conditions or instructions for transportation (according with your knowledge). | EACH SENSOR HAVE TO COME IN ITS OWN RECIPIENT |

RELATED SERVICES

• Transportation

• Insurance

• Installation

• Commissioning

• Training

• Initial Maintenance Etc.

**Annex No. 2**

**CONDITIONS OF PURCHASE**

1. Identification of the Bidder: The bidder must deliver the following information regarding the company:

• The business social reason: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

• Company RUC: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Modality of purchase: The quotation presented by the offeror is considered Suma Alzada, so its price is not subject to any adjustment and it includes all expenses, duties and taxes that could affect the quoted asset . It also includes, according to what is specified in Annex No. 1, the related services such as transportation, insurance, installation, commissioning, training and initial maintenance, if applicable.

The delivery of the assets will be delivered to the Buyer's warehouse, I quote:

**Laboratory O504 - Artificial Intelligence Laboratory**

Likewise, it is understood that the assets offered are new and have official representatives in the Country and Technical Service authorized by the manufacturer, when applicable.

3. Presentation of the quote: The quote will be delivered to the Buyer by physical means in a sealed envelope or to email address through the following addresses:

Address: 1801 University Ave. - San Miguel.

Email: [logistica-compras@pucp.pe](mailto:logistica-compras@pucp.pe)

The period of validity of the quotation will be ..... (Indicate the number) calendar days. The quotation of the bidder must follow what the documents of the present "Price Comparison" indicate, in what corresponds to assets, total unit prices of the assets, terms of delivery and guarantees offered as well as the related services requested.

Likewise, each asset must attach a checklist of technical specifications, indicating compliance with the requirements of Annex No. 1.

In addition, you must accompany, when appropriate, the respective catalogs of the assets offered in Spanish.

The deadline to present the quotation will be on March 29, 2018, until 5:00 pm, at the Logistics Office of the Pontifical Catholic University of Peru (PUCP), located at 1801 University Ave. - San Miguel.

Any quotation that the Buyer receives after the deadline for the presentation of the quotations will be declared late, rejected and returned to the Bidder without opening.

4. **Evaluation of contributions**: The contributions received for the assets requested in this price comparison will be evaluated considering the lowest price offered within those that meet the technical requirements specified in Annex No. 1.

To evaluate the Quotes, the Buyer must determine the evaluation price of each offer correcting arithmetic errors of the Price Quotation, in the following way:

a. In case there are discrepancies between numbers and words, the amount in words will prevail.

b. in case there are discrepancies between the unit price and the total of the item that results from multiplying the unit price by the quantity, the unit price will prevail;

c. If a Bidder agrees to accept the correction, its Quotation will be rejected.

5. **Award:** The bidder selected after the evaluation process must formalize its quotation with the Buyer within a period not exceeding [... .05] calendar days by signing the contract or receiving the Purchase Order.

6. **Receipt and delivery of assets**: The reception of the acquired assets will be made in [specifically indicate the place] in the case of assets that do not require installation. Regarding the assets acquired with installation included, they will be received in their place of operation once the installation activities are concluded according to the term indicated by the offeror in their quotation, in each case. The Buyer will issue a report of reception and compliance.

The deadline for delivery of the assets will be ......................... (Indicate the term in No. of days) from the subscription of the contract or notification of the purchase order, as applicable.

The Buyer reserves the right to refuse assets with quality defects or for non-compliance with the requirements indicated in Annex No. 1. In this case, said assets will be considered as not delivered for all legal purposes, the supplier incurring in breach of contract.

In this case, the Buyer may apply the penalties and fines contemplated in the respective contract and exercise the rights that correspond to obtain full, timely and full compensation for the damages caused by the breach of contract by the provider.

7. **Form of Payment**: The assets will be paid by the Buyer within a period not exceeding twenty [20] days from receipt of the invoice and the respective conformity of the user area.

8. **Performance Guarantee**: The warranty period of the equipment will be [between 3 months and one year depending on the good to be acquired]. The supplier must present a statement of the terms under which he will deliver the performance guarantee for the equipment offered. This document must detail the faults and spare parts that will be covered, during the warranty period, at no cost to the Buyer in the event that their quotation is accepted. The offeror must at the signing of the contract or notification of the purchase order deliver the "Certificate of Performance Guarantee".

**9. Right of the Buyer to Accept any Quotation and to Reject All or Any of the Quotes:** The Buyer reserves the right to accept or reject any Quotation, to cancel the process and to reject all Quotes at any time before the awarding of the Quotation. hiring, without thereby acquiring any liability to the Bidders or the obligation to inform them about the reasons for making such a decision.

**Annex No. 3**

QUOTATION FORM

[The Offeror will complete this form according to the indicated instructions. No alterations will be allowed to this form nor will substitutions be accepted]

Date: [Indicate the date (day, month and year) of the presentation of the offer]

**A: FONDECYT** - Project "Improvement and Extension of the Services of the National System of Science, Technology and Technological Innovation"

We, the undersigned, declare that:

a) We have examined and do not find any objection to the solicitation documents.

b) We offer to provide the following Related Assets and Services in accordance with this quotation and in accordance with the quotation request documents, the established Delivery Plan and the List of Assets: ......................... **within a period of** \_\_\_\_\_\_\_ **calendar days from the start date**.

c) The total price of our offer, excluding any discount offered is:

**[Indicate the value of the offer in letters and numbers].**

d) Our offer will remain in force for a period of ......... (....) days counted from the date of presentation of the quotation, that is until the day **xx of xx of 201x.**

e) We understand that this offer, together with its due acceptance in writing included in the award notification, will constitute a contractual obligation between us, until the formal purchase order has been perfected by the parties.

f) We understand that you are not obligated to accept the lowest evaluated quote or any other quote you receive.

g) Our quotation was prepared independently, without any consultation, communication or agreement with any other bidder or competitor related to (i) the prices; (ii) the intention to submit a quote; or (iii) the methods and factors used to determine technical and financial aspects of the quote.

h) The prices of the quotation have not been and will not be disclosed directly and / or indirectly to other bidders and / or competitors before the act of opening the quotes;

i) The bidder has not incurred or incurred in acts aimed at inducing, forcing, coercing, or agreeing with other bidders their participation or not in this process with the purpose of restricting competition.

j) We have not breached any contract with the Employer during the period specified in this application.

(Signature and stamp of the legal representative of the company)

First name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The day \_\_\_\_\_\_\_\_\_ of the month \_\_\_\_\_\_\_\_\_\_\_\_ of the year \_\_\_\_\_\_\_

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Assets | | | | Date: | |
|  | |
| 1 | 2 | 3 | 4 | 5 | 6 |
| N° Item | Description | Quantity and Physical Unit | Unit price | IGV | Total price per item |
| 1 |  |  | (Indicate the unit price per unit) |  | (Indicate the total price per unit) |
|  |  |  |  | **Total Price of the Offer** |  |