Ref. Ares(2023)445700 - 20/01/2023

ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER

Contract title: Supply of Equipment for SUMP- Kahramanmaraş **p 1 /…**

Publication reference: NEAR/ANK/2023/EA-OP/0005

Columns 1-2 should be completed by the contracting authority
Columns 3-4 should be completed by the tenderer
Column 5 is reserved for the evaluation committee

Annex III - the contractor's technical offer

The tenderers are requested to complete the template on the next pages:

- Column 2 is completed by the contracting authority shows the required specifications (not to be modified by the tenderer),
- Column 3 is to be filled in by the tenderer and must detail what is offered (for example the words ‘compliant’ or ‘yes’ are not sufficient)
- Column 4 allows the tenderer to make comments on its proposed supply and to make eventual references to the documentation

The eventual documentation supplied should clearly indicate (highlight, mark) the models offered and the options included, if any, so that the evaluators can see the exact configuration. Offers that do not permit to identify precisely the models and the specifications may be rejected by the evaluation committee.

The offer must be clear enough to allow the evaluators to make an easy comparison between the requested specifications and the offered specifications.

The Tenderer should avoid copying the specifications required from Column 2 to specifications offered in Column 3. Column 3 shall be filled by the Tenderer with the exact/real specification for the offered supplies.

Each offered supplies must be stated with brand / product name, product version and product/part number. The tenderer shall identify model and manufacturer of each individual item in their technical offer. Offers that do not permit to identify clearly and precisely the existence of the items with all the proof documents and/or certifications requested through this annex may be rejected by the evaluation committee.

1. General Requirements

1.1. Offered supplies must be provided complete with necessary accessories and/or parts to ensure that the supplied items are operating to required technical and quality specifications.

1.2. The contractor is fully responsible for proper connections of supplied items to existing infrastructure for smooth installation and operation.

1.3. The type of voltage in Turkey is 220 V (mono phase) and 380 V (tri phase + neutral). All hardware including bicycle batteries and bicycle battery chargers must be suitable or adapted for direct connection to the standard power outlets in Turkey. The type of electrical outlets generally installed in Turkey is the type with 2 side mounted earthing poles (EUROPLUG). All plugs of all goods will have to fit exactly. The contractor shall evaluate the supplied current, the quality of the current and the fluctuations of the current and take the necessary precautions to avoid damages to the equipment.

1.4. The supplies must be compliant with CE standards. Wherever reference is made in the technical specifications to specific standards and codes to be met, provisions of the latest edition or revision of the relevant standards in effect, shall apply, unless otherwise stated in this technical specification.

1.5. The supplies should comply with the regulations concerning safe operation, energy saving and environmental safety, in line with the policies or the practical measures in use within the EU and Turkey.

1.6. During the installation of supplied items, the contractor will be responsible for providing measures for any associated health & safety risks.

1.7. System components and whole system must be compatible with each other “as a whole”. Any compatibility problems between software and hardware must be resolved by the contractor at no additional cost to Kahramanmaraş Metropolitan Municipality (KMM) and the Contracting Authority.

1.8. All offered supplies must be suitable for operation in the climatic conditions in place of delivery (please refer to “Draft Contract and Special Conditions, including annexes”).

1.9. For warranty, the contractor shall comply with the special and general conditions Article 32 and 33, Warranty Regulation of Turkish Law.

2. Technical documents to be provided during the implementation period

2.1. Please refer to Article 14 of Special Conditions of the Contract.

2.2. Please refer to Article 31 of Special Conditions of the Contract for obligatory documents needed for the Provisional Acceptance.

3. Installation and commissioning requirements

3.1. Please refer to the Article 25 of Special Conditions of the Contract.

3.2. The contractor shall make available to himself all tools, materials and equipment required for transport, assembling, installation and commissioning.

3.3. Consumptions on site during the installation and commissioning shall be borne by the contractor.

3.4. The contractor shall provide all tools and equipment needed for testing of supplies.

3.5. The contractor shall perform starting-up, installation and commissioning of the supplies by trained and authorized personnel including unloading, furnishing to designated location, unpacking, assembling and connection to main supply and removal of packing materials from site in accordance with Article 29 of Special Conditions.

3.6. Full assembly and complementary engineering related to the installation and put into operation will be borne by the contractor including integration of software, bicycles, bicycle batteries, bicycle battery chargers, bicycle parking racks and parking signs. Connection to main electrical, mechanical, water, air and/or gas supplies from the equipment to the existing infrastructure shall be done according to the rules and regulations of Turkey. Recovering any damage to building structure that may occur during the installation of goods is under the responsibility of the contractor.

3.7. Subscription for all utility connections such as internet, electricity, water, etc. to relevant authorities shall be under a responsibility of the KMM.

3.8. Purchasing and subscription of sim cards for Item 1.1.13 shall be under the responsibility of the KMM.

3.9. Operation costs of SMS notification and verification services (Item 1.6.5.8) shall be under responsibility of the KMM.

3.10. The mobile application module of the Item 1.6 shall be uploaded to Google Play and Apple Store on behalf of KMM.

3.11. Any other components which are not explicitly mentioned but required for fully functioning of the system shall be provided by the contractor during installation and commissioning.

3.12. All software must be delivered and installed in electronic version. All software must be licensed to the KMM.

4. Health and safety

4.1. The contractor shall be fully responsible for applying the health and safety procedures in accordance with the latest Turkish legislation namely by the Ministry of Labor and Social Security during the manufacturing, delivering, assembling, installation, commissioning and testing. Moreover, the contractor shall be

responsible for advising KMM and the Contracting Authority of any health and safety risks associated with supplies provided and suitable protective measures.

4.2. Supplies shall be designed to operate safely taking into account the characteristics of the terrain and its surroundings, atmospheric and meteorological conditions, any possible structures and obstacles located in the vicinity either on the ground or in the air in such a way as to cause no nuisance or pose no danger under operation or servicing conditions or in the event of an operation to rescue persons.

5. Training requirements

5.1. Following installation and commissioning of supplies, the contractor shall provide trainings for KMM staff.

5.2. The tenderers shall include in their offer a training plan according to requirements in this Technical Specifications (duration, topics provided in tables hereunder are requested as a minimum). The contractor (if required) may extend training durations and topics covered.

5.3. Trainings shall be realized in Turkish or English language with simultaneous translation when necessary.

5.4. Trainings shall be provided by qualified instructors.

5.5. All necessary accessories, materials and documentation for trainings shall be provided by the contractor.

5.6. Unless otherwise required, trainings shall be realized in KMM facilities in Turkey.

5.7. The trainings shall be recorded by the contractor and provided as a separate media to the KMM for future use.

Lot /Item No.	Description of the Item	Content of the Trainings	Min Number of Training days	Max Number of Participants
1.1 **1.2** **1.3** **1.4** **1.5** **1.6**	Electric bicycle Bicycle battery Bicycle battery charger Bicycle parking rack Parking sign Fleet management software	The training shall include theoretical and applied training. The training shall cover topics including but not limited to: • Overview and terminology, • Basic usage training, • Maintenance and troubleshooting, • User interface and software, • Installation, assembly and maintenance. • Health and safety requirements.	**20**	**15**

6. Warranty requirements

6.1. Please refer to Article 32 and Article 33 of Special and General Conditions of the Contract and Warranty Regulation of Turkish Law as published on Official Gazette no.29029 dated 13.06.2014.

6.2. Only original or approved by the manufacturer(s) spare parts should be used in any repair service.

6.3. The contractor shall provide available software updates during the warranty period.

6.4. The tenderer shall provide a list of spare parts for informative purposes only.

7. Visibility

7.1. All projects /contract implemented under this programme shall comply with the latest Visibility Guidelines for European Commission Projects in Türkiye published by the EU Delegation to Türkiye. Please refer to Article 9 of Special and General Conditions of the Contract.

7.2. Proper material and size compatible with specifications and dimensions of supplies shall be offered by contractor and approved by Contracting Authority after the commencement of the Contract.

7.3. Label shall be designed in accordance with the Article 9 of Special and General Conditions of the Contract.

7.4. Label shall be coloured, readable, visible and durable.

7.5. The contractor shall take the necessary measures to ensure the visibility of the European Union financing or co financing. These measures must comply with the latest Communication and Visibility Requirements for EU-funded external action, laid down and published by the European Commission.

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.1	**Electric bicycle**			
	Manufacturer's name; product model/type:			
	Country of origin:			
	Quantity: 100			
1.1.1	The bicycle shall have a unique identification number registered in the Item 1.6 (Fleet Management Software).			
1.1.2	The motor of bicycle shall be with brushless engine type and have a power of min. 250W.			
1.1.3	The bicycle shall be able to achieve 25 km/h speed on straight road.			
1.1.4	The bicycle shall comply with the certification CE EN15194 for electric power bicycles. It shall be possible to use bicycle without an energy source/battery (with pedals only).			
1.1.5	The frame of the bicycle shall be made with 6061 or higher quality aluminium alloy.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.1.6	The bicycle shall be in accordance with ISO 4210-2:2015 Cycles — Safety requirements for bicycles — Part 2: Requirements for city and trekking, young adult, mountain, and racing bicycles. The bicycle cables shall be protected from external access i.e. all cables shall be interlaced within the bicycle. Gear mechanism, chain, brakes, dynamo, and electrical components must be enclosed into the bicycle.			
1.1.7	The bicycle shall have IP 65 or higher water, dust, rust resistance.			
1.1.8	The rims of the bicycle shall be 26 inches. Front and rear tires of the bicycle shall have mudguards. The material of mudguards shall be impact resistant plastic, the connection points shall be made of steel. It should have adjustable angle and position for tire coverage. Tires of the bicycle shall be inflatable and resistant to bursting in accordance with: • ISO 5775-1:2014 -Bicycle tires and rims — Part 1: Tire designations and dimensions • ISO 5775-2:2015 -Bicycle tires and rims — Part 2: Rims.			
1.1.9	The bicycle shall have front and rear roller, drum or hydraulic disc brake system.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.1.10	The bicycle shall have a hub gear system with minimum 3, maximum 7 gears. The bicycle shall be able to have automatic gears controlled by a torque sensor.			
1.1.11	The weight of the bicycle shall not exceed 30 kg.			
1.1.12	1. The bicycle shall integrate with Item 1.6 (Fleet Management Software) for the purpose of localization through GPS system. 2. GPS system shall be compatible with Geo-fencing security measures defined under item 1.6 (Fleet Management Software) 3. The Geo-fencing system shall use GNSS (Global Navigation Satellite System) device data. 4. The Geo-fencing system data which will be used in the bicycles shall also receive (or shall be compatible) GNSS signals. The bicycle shall be capable of receiving signals from at least two GNSS systems (GPS or Galileo or Glonass or equivalent).			
1.1.13	The bicycle shall integrate with Item 1.6 (Fleet Management Software) for the purpose of data transfer through sim card. (see 3.8 of Installation and commissioning requirements)			
1.1.14	The bicycle shall have theft and vandalism prevention mechanisms including GPS tracking/locking, alarm, anti-theft nuts on front and rear. The vandalism prevention mechanism on bicycles shall detect irregular actions and send a warning notification (signal) to the Item 1.6 (Fleet Management Software.)			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.1.15	The bicycle shall have auxiliary cable lock system for locking, which shall unlock through Item 1.6 (Fleet Management Software) with QR code or Bluetooth. Auxiliary lock system shall have rust-proof vinyl coating on the flexible braided-steel cable. 1. Cable thickness minimum 12 mm 2. Cable lock weight between 0,6 and 1,4 kg 3. Cable length minimum 120 cm 4. Minimum security standard level shall be silver or high or 4 star or 10 to 15 or 6 of 10 or equivalent.			
1.1.16	There shall be a basket in a front handlebar stem on the bicycle. Internal volume of the basket shall have a minimum volume of 14 litres. It shall be made of electrostatically painted aluminium alloy tubular frame structure. It shall have a minimum carrying capacity of 10 kg.			
1.1.17	The bicycle shall have a cell phone holder.			
1.1.18	The bicycle shall be equipped with: 1. LED headlight with minimum 600 lumens. 2. At least 2 reflectors on the bike, one of them is on the rear fender. The others may be in places such as pedals, wheels or saddle. Reflectors must be visible from a minimum distance of 140 m. 3. Bell with an aluminium body.			
1.1.19	The bicycle shall have an advertisement place on the lateral sides of the fender of the rear wheel.			
1.2.	**Bicycle battery**			
	Manufacturer's name; product model/type:			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
	Country of origin:			
	Quantity: 200			
1.2.1	The bicycle battery shall be compatible with and easily swappable from the bicycle.			
1.2.2	The bicycle battery shall: 1. be lithium-ion type, 2. have minimum 36V nominal voltage and minimum 12.5 Ah or higher storage capacity, 3. ensure minimum 60 km operation range with fully charged, 4. fully charge in max 6 hours, 5. be suitable for safe transport and not classified as a dangerous substance according to GHS Hazard Classification.			
1.2.3	Battery life cycle should be at least 500 charging cycles.			
1.2.4	The battery shall be protected from external access by end-users. The battery shall have a strong locking mechanism to ensure batteries cannot be removed from e-bikes by unauthorized people. The battery should be equipped with the theft and vandalism prevention mechanism that is as a minimum GPS tracking of the battery or digital lock of the battery.			
1.3.	**Bicycle battery charger**			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
	Manufacturer's name; product model/type:			
	Country of origin:			
	Quantity: 100			
1.3.1.	Charger shall be compatible with the bicycle battery (item 1.2) and the fleet management software (item 1.6).			
1.3.2.	The charger shall fully charge the battery in max. 6 hours.			
1.3.3.	The charger must be fuse protected against high current and short circuit.			
1.3.4.	The battery charger should be equipped with a LED indicator, whose colour changes and provides visual feedback of the charging status.			
1.4.	**Bicycle parking rack**			
	Manufacturer's name; product model/type:			
	Country of origin:			
	Quantity: 57			
1.4.1	Bicycle parking racks in the form of spiral to be installed (attached and detached by anchoring to the ground) in the designated 57 parking areas.			
1.4.2	Bicycle parking racks shall have a pipe modular design with 5 bicycles in a one and 5 bicycles in other way parking (10 in total).			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.4.3	Bicycle parking racks shall be made of galvanized steel or galvanized coated iron.			
1.4.4	Bicycle parking racks shall have IP 65 or better water and dust resistance.			
1.4.5	The pipe of the racks shall be minimum 40 mm. diameter and 2 mm. thickness. It must be minimum 150x50x70 cm in size.			
1.5.	**Parking sign**			
	Manufacturer's name; product model/type:			
	Country of origin:			
	Quantity: 57			
1.5.1	A parking sign shall be installed (attached and detached by anchoring to the ground) in the designated 57 parking areas.			
1.5.2	Parking sign board shall be 40 cm X 40 cm. size, indicating the name and identification number of the bicycle parking area and other information as requested by KMM.			
1.5.3	Parking sign shall have IP 65 or better water and dust resistance.			
1.5.4	Parking sign shall be between 2.50- 2.80 meters height. Parking sign shall be made with a galvanized steel pipe with a thickness of at least 2.5 mm and a diameter of 60 mm.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.6.	**Fleet management software**			
	Manufacturer's name; product model/type:			
	Country of origin:			
	Quantity: 1			
1.6.1	The software shall be used for management of the Kahramanmaraş Smart Bicycle System.			
1.6.2	5 years license for use of the Fleet Management Software shall be included in the offer for Item 1.6. Offer shall include necessary licences and all updates for usage of minimum 150 bicycles by KMM.			
1.6.3	The software interface shall be mobile and web-based (SSL certificated connection) for System Management (1.6.3). The software interface shall be web-based (only for information purposes) and mobile for end-users.			
1.6.4	The software shall have following modules: 1. Authorization Management 2. System Management 3. Mobile Application			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.6.5	The software shall have minimum following hierarchy roles: 1. Super Admin/Admin or equivalent, 2.Operators (customer support, sales, field maintenance, others) or equivalent 3. Customer/End-user or equivalent			
1.6.6	Authorization Management module shall have at least following functions: 1. Log management; 2. Subscriptions (registration/closing/blocking accounts) including collecting profile's name, surname, identification number, GSM number, e-mail address and other information to complete subscription; 3. Classification of all users' profiles; 4. Recording as a log all transactions made by users (log in, log out, payment history and others); 5. Recording the profiles passwords into software database (i.e. AES or BCrypt hash algorithm or equivalent); 6. Resetting user's passwords; 7. E-mail notifications; 8. SMS notification and verification system. (see 3.9 of Installation and commissioning requirements)			
1.6.7	Validation web-services shall be integrated with Authorization Management module.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.6.8	System Management module shall have at least following functions for management (super admin/admin, operators): 1. Locations and status of bicycles and parking areas; 2. Parking area local physical address, location / coordinates 3. Indication of available bicycles and their situation (battery level, malfunctions and others) in a real time; 4. Allowing parking of the bicycle at any place for end-users (free-float system or virtual station or other solution); 5. Supporting geo-fencing usage of the bicycles for end-users according to forbidden zones defined by management; 6. Marking and blocking certain bicycles as needed; 7. Package creator (for a definition of different rental rules with limitations, geofencing, different packages for different zones, allowing changes of tariff fees in order to encourage citizens to use bicycles during some certain periods, etc.) 8. Providing emergency warnings and notifications to management.			
1.6.9	System Management module shall report the performance of rental system, and the situation of all bicycles (locations, battery situation, functional status, availability and other).			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.6.10	System Management module shall report (daily, monthly and yearly) at least following information: 1. Rental revenues, 2. End-users' membership status, 3. Bicycles locations and physical situations, 4. Bicycle travel distance information/details. 5. Maintenance and repair history. Shall be able to show all bicycles, parking areas on a list format.			
1.6.11	System Management module shall have an Emergency Alert feature that shall warn the management and end-users at least at following situations: 1. Bicycle battery level warning; 2. Locations of the bicycles; 3. Forbidden zones (Geo-fencing); 4. Users mistakes / miss-usage; 5. Accidents. Warnings shall be automatically provided by the System Management module to the management and end-users via mobile/e-mail.			
1.6.12	System Management module shall allow management to mark and block a certain bicycle in a case of reported mismanagement, disability, malfunction, out of charge, maintenance and other conditions preventing usage of the bicycles. Operators shall be able to identify certain bicycle for a collection through alert from the System Management module.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.6.13	Shall show active and passive usage time of bicycles in real time.			
1.6.14	Mobile Application module shall enable end-users to rent electric bicycle (Item 1.1).			
1.6.15	Mobile Application module shall be compatible with IOS and Android. All updates related to current versions of IOS and Android shall be done by the Contractor.			
1.6.16	Mobile Application module shall have at least following functions: 1. Showing location of the parking areas and their distances to end-users on the mobile application map. 2. Showing usage period, travel distance made, and rental cost of the bicycles related to user. 3. Providing notification about promotional campaigns to the end-users through push notification feature. 4. Providing payment method(s) for the end-users. 5. Providing information about battery level of the bicycle 6. Alerting if battery level of the bicycle goes below 10 percent. 7. Possibility for the end-users to rent multiple bicycles at the same time. 8. Issue Membership and Personal Data Protection Law agreement documents (the contract) between Kahramanmaraş Metropolitan Municipality and end-user to be validated by the end-user through the mobile application. 9. Enable reservation for a particular bicycle. 10. The bicycle shall be unlocked through application with QR code or Bluetooth.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.6.17	Mobile Application shall provide a section called as Solution Centre (ALO 153) to be integrated into KMM call centre- Çağrı Merkezi - Çözüm Masası. The Solution Centre shall contain a sub-section called as Help. This section shall be in Turkish and English, and it shall include frequently asked questions & answers.			
1.6.18	Providing secure verification for the end-users.			
1.6.19	Mobile Application module shall have at least following functions and payment options: 1. Secure customers credit card information through encryption (ie AES, BCrypt hash algorithm or equivalent); 2. Providing virtual wallet for end-users; 3. Send security code to the end-users' GSM numbers in order to complete payment; 4. Automatically prepare financial invoices arising from the charges of bicycle usage. The software shall send these invoices to provided e-mail addresses of users. Invoicing shall be suitable for the general accounting system used in Turkey. 5. Payment Provider Type shall be Virtual Point of Sales (virtual POS)			
1.6.20	Mobile Application module shall be Native or Hybrid developed.			
1.6.21	The database of the software should be based on relational management system and licensed to full use without any restrictions.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.6.22	All the user data entered, collected or produced by the Fleet Management Software shall be a sole property and under ownership of the KMM. All data obtained from Fleet Management Software shall be stored in Turkey in accordance with Presidential Decree No:2019/12 published on 30823 numbered, 06.07.2019 dated Official Gazette.			
1.6.23	All needed elements of Fleet Management Software shall be set up by the contractor to the server that is provided by KMM.			
1.6.24	Fleet Management Software shall have both Turkish and English language interface.			