Ref. Ares(2021)7570282 - 08/12/2021

ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER

Contract title: Supply of Equipment for SMART Ankara **p 1 /…**

Publication reference: NEAR/ANK/2021/EA-OP/0176

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 capable of 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 charging docks in Item 1.2 - SBS stations 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 Health & Safety risks associated with supplies provided.

1.7. For Lot 1; 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 Ankara Metropolitan Municipality - Directorate General of EGO 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 as published on Official Gazette no.29029 dated 13.06.2014.

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, SBS stations under Lot 1. 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 Ankara Metropolitan Municipality – Directorate General of EGO.

3.8. Purchasing and subscription of sim cards for Item 1.1 shall be under the responsibility of the Ankara Metropolitan Municipality – Directorate General of EGO.

3.9. Operation costs of SMS notification and verification services (Item 1.3.5.8) shall be under responsibility of the Ankara Metropolitan Municipality – Directorate General of EGO.

3.10. The mobile application module of the Item 1.3 shall be uploaded to GooglePlay and Apple Store on behalf of Directorate General of EGO.

3.11. Any other components which are not explicitly mentioned under Lot 1 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 Ankara Metropolitan Municipality – Directorate General of EGO.

4. Health and Safety

4.1. The contractor shall be fully responsible for applying the Health and Safety procedures in accordance with the legislation published by Republic of Turkey, Ministry of Labor and Social Security during the manufacturing, delivering, assembling, installation, commissioning and testing. Moreover, the contractor shall

be responsible for advising Ankara Metropolitan Municipality – Directorate General of EGO 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 Ankara Metropolitan Municipality – Directorate General of EGO 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 minimum). The contractor (if required) may extend training durations and topics covered.

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

5.4. Trainings shall be provided by qualified instructors.

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

5.6. Unless otherwise required, trainings shall be realized in Ankara Metropolitan Municipality – Directorate General of EGO facilities in Turkey.

5.7. The trainings shall be recorded by the contractor and provided as a separate media to the Ankara Metropolitan Municipality – Directorate General of EGO 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**	Electric Bicycles SBS Stations Fleet Management Software Bicycle Counter with LCD Display	The training shall include theoretical training and applied training. The trainings shall cover topics including but not limited to: • Overview and terminology, • Basic usage training, • Maintenance and troubleshooting, • User interface and software, • Health and safety requirements.	**20**	**15**
2.1	Bicycle Rack for Busses	The training shall include theoretical training and applied training. The trainings shall cover topics including but not limited to: • Basic usage training,	**2 (hours)**	**400***

Lot /Item No.	Description of the Item	Content of the Trainings	Min Number of Training days	Max Number of Participants
		• Installation, assembly and maintenance.		
2.2	Bicycle Ramp for Metro Stations	The training shall include theoretical training and applied training. The trainings shall cover topics including but not limited to: • Overview and terminology, • Basic usage training, • Installation, assembly and maintenance.	**1**	**10**
3.1	Bicycle Carriage Vehicles	The training shall include theoretical training and applied training. The trainings shall cover topics including but not limited to: • Overview and terminology, • Basic usage training, • Maintenance and troubleshooting, • Health and safety requirements.	**1**	**2**
4.1 **4.2**	Laptop Mini Projection Device	The training shall include theoretical training and applied training. The trainings shall cover topics including but not limited to: • Overview and terminology, • Basic usage training, Maintenance and troubleshooting.	**1**	**10**

***** Number of bus drivers of Directorate General of EGO

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. For Lot 1, the tenderer shall provide a list of spare parts for informative purposes only.

7. Visibility

7.1. 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 enclosed sign without any distortion.

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

7.5. For all lots, the contractor shall take the necessary measures to ensure the visibility of the EU financing or co-financing. Such measures must be in accordance with the applicable rules on the visibility of external action laid down and published by the Commission. These rules are set out in the Communication and Visibility Manual for External Actions available from the EuropeAid website at https://ec.europa.eu/europeaid/funding/communication-and-visibility-manualeu-external-actions_en.

7.6. For Lot 1- Item 1.2, the contractor shall provide metal signboard/plaque with minimum 20 cm x 30 cm size at all SBS stations to ensure visibility of EU financing or co-financing.



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Avrupa Birliği ve Türkiye Cumhuriyeti tarafından finanse edilen
"xxxxx Projesi" kapsamında satın alınmıştır.

EuropeAid No	
Item / Birim No	
Fixed Asset / Demirbaş No	







LOT 1: Smart Bicycle System

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: 408			
1.1.1.	The bicycle shall be same brand or fully compatible with the Item 1.2 SBS station.			
1.1.2.	The bicycle shall have a unique identification number registered in the Item 1.3 (Fleet Management Software).			
1.1.3.	The motor of bicycle shall have a power of min. 250W with brushless engine type.			
1.1.4.	The bicycle shall comply with the certification CE EN15194 for electric power bike. It shall be possible to use bicycle without an energy source (with pedals only).			
1.1.5.	The bicycle shall be able to achieve 25 km/h speed on straight road.			

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 battery; 1. Shall be lithium-ion type, 2. Shall have minimum 36V nominal voltage and minimum 9.5 Ah or higher storage capacity, 3. Shall ensure minimum 60 km operation range with fully charged, 4. Shall fully charge in max 6 hours, 5. Shall be swappable, 6. Shall be suitable for safe transport and not classified as a dangerous substance according to GHS Hazard Classification.			
1.1.7.	The frame of the bicycle shall be made with 6061 or higher quality aluminum alloy.			
1.1.8.	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 according to the above mentioned ISO Standard.			
1.1.9.	The bicycle shall have IP65 or higher water, dust, rust resistance.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.1.10.	The rims of the bicycle shall be 26 inches. Front and rear tires of the bicycle shall have mudguards. The material of the 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.			
1.1.11.	The bicycle shall have front and rear roller or hydraulic brake system.			
1.1.12.	The bicycle shall have a hub gear system with minimum 3, maximum 7 gears.			
1.1.13.	The weight of the bicycle shall not exceed 30 kg.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.1.14.	The bicycle shall integrate with Item 1.3 (Fleet Management Software) for the purpose of localization through GPS system. GPS system shall be compatible with Geo-fencing security measures defined under item 1.3 (Fleet Management Software). The Geo-fencing system shall use GNSS (Global Navigation Satellite System) device data. 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).			
1.1.15.	The bicycle shall integrate with Item 1.3 (Fleet Management Software) for the purpose of data transfer through sim card. (see 3.9 of Installation and commissioning requirements)			
1.1.16.	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 1.3 (Fleet Management Software).			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.1.17.	The bicycle shall have auxiliary cable lock system for locking, which shall unlock through Item 1.3 (Fleet Management Software) with QR code or Bluetooth. Auxiliary lock system shall have rust-proof vinyl coating on the flexible braided-steel cable. • Cable thickness minimum 12 mm • Cable lock weight between 0,6 and 1,4 kg • Cable length minimum 120 cm • Minimum security standard level shall be silver or high or 4 star or 10 to 15 or 6 of 10 or equivalent.			
1.1.18.	There shall be a basket in a front handlebar stem on the bicycle. Internal volume of the basket shall have a minimum capacity of 14 liters. It shall be made of electrostatically painted aluminum alloy tubular frame structure. It shall have a minimum carrying capacity of 10 kg.			
1.1.19.	The bicycle shall have cell phone holder.			
1.1.20.	The bicycle shall be equipped with: 1. LED headlight with minimum 600 lumens. 2. 2 red warning tools reflectors on the back of the seat and on the rear fender. Reflectors must be visible from a minimum distance of 140 m. 3. Bell with an aluminum body.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.1.21.	The bicycle shall have an advertisement on the lateral sides of the fender of the rear wheel.			
1.2.	**SBS Station**  * This picture is provided for illustration only. SBS Stations shall be delivered, installed/built by the contractor at the locations in Ankara according to Appendix 1.			
	Manufacturer's name; product model/type:			
	Country of origin:			
	Quantity: 34			
1.2.1.	Each SBS station shall have 12 charging docks to be installed at 34 locations in Ankara (Appendix 1). SBS station shall have a modular design that can be adjusted for different number of docks and dock layouts for bicycles.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.2.2.	The concrete foundation for SBS Station shall be C30 or better quality with thickness of minimum 15 cm and size of 12x3 meters.			
1.2.3.	The body of SBS station shall be made of corrosion resistant metal or shall be corrosion resistant (i.e. painted with electrostatic powder).			
1.2.4.	SBS station shall be waterproof in accordance with IP65 or higher standard.			
1.2.5.	Each dock of the SBS station shall fully charge electric bicycle (Item 1.1) in maximum 6 hours.			
1.2.6.	SBS station shall prevent docking of other types of bicycles.			
1.2.7.	When the electricity in the system is cut and/or exhausted, the user will still be able to park and lock the bicycle.			
1.2.8.	The lock system of the SBS station shall have an option to be opened manually by administration.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.2.9.	The SBS station shall be equipped with a sensor identifying movements of the electric bicycle (Item 1.1.) The SBS station shall be equipped with a sensor that recognizes electrical bicycles using RFID, Bluetooth or equivalent technologies. The charge status of the bicycle, the bicycle's estimated percentage of charge and data like, which bike was locked when it was unlocked shall be transmitted to the Fleet Management Software. In case of any change in the values of electric current and voltage or any type of malfunction, the system shall send an alert to the Item 1.3 (Fleet Management Software).			
1.2.10.	SBS station shall have IP camera with 3G + 4G-LTE connectivity working 7/24. Cameras shall be able to record in HD quality (minimum 720p resolution) working effectively during day and night and shall have min. 30 days record capacity. Cameras shall have IP65 or higher water, dust, rust resistance.			
1.2.11.	There shall be a light pole with minimum 20W LED lighting armature to sufficiently light all the charging docks, aid camera's visual for night recordings. Light pole shall has warning metal sign with minimum 20 cm x 30 cm size to prevent people from locking their regular bicycles to the charging docks.			
1.2.12.	Lighting and camera shall be installed on galvanized metal pole with minimum 4-meter height.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.3.	**Customized Fleet Management Software**			
	Manufacturer's name; product model/type:			
	Country of origin:			
	Quantity: 1			
1.3.1.	The software shall be used for management of the Smart Bicycle System.			
1.3.2.	The software interface shall be mobile and web-based (SSL certificated connection) for System Management. The Software interface shall be web-based (only for information purposes) and mobile for end-users.			
1.3.3.	The software shall have following modules: 1. Authorization Management 2. System Management 3. Mobile Application			
1.3.4.	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. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.3.5.	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)			
1.3.6.	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
1.3.7.	System Management module shall have at least following functions for management (super admin/admin, operators): 1. Locations and status of SBS stations and bicycles; 2. Station profiles (hardware version, firmware version, station status and last check-in time, local physical address, station location/coordinates, modem firmware, list of equipment on station and their statuses, firmware versions, etc.); 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. Updating locations of SBS stations and updating number of charging docks; 8. Marking the SBS stations as active and passive as needed; 9. 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.) • Providing emergency warnings and notifications to management.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.3.8.	System Management module shall report the performance of rental system, the stations occupancy and the situation of all bicycles (locations, battery situation, functional status, availability and other).			
1.3.9.	System Management module shall report (daily, monthly, and yearly) at least following information: 1. Rental revenues, 2. End-user's 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, SBS stations/docks on a list format.			
1.3.10.	System Management module shall have an Emergency Alert feature that shall warn the management and end-users at least at following situations: 1. SBS station and docks lock down; 2. Bicycle battery warning; 3. Locations of the bicycles; 4. Forbidden zones (Geo-fencing); 5. Users mistakes / miss-usage; 6. Accidents. Warnings shall be automatically provided by the System Management module to the management and end-users via mobile/e-mail.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.3.11.	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 from and return to SBS station through alert from the System Management module.			
1.3.12.	Shall show active and passive usage time of bicycles and docks in real time.			
1.3.13.	Mobile Application module shall enable end-users to rent electric bicycle (Item 1.1).			
1.3.14.	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. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.3.15.	Mobile application module shall have at least following functions: 1. Showing location and availability of the stations 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 EGO and end-user to be validated by the end-user through the mobile application. 9. Enable reservation for particular bicycle. 10. The bicycle shall be unlocked through application with QR code or Bluetooth.			
1.3.16.	The mobile application shall provide a section called as Solution Center which shall be integrated into Başkent 153[1]. The Solution Center shall contain a sub-section called as Help. This section shall be in Turkish and English and it shall include frequently asked questions & answers.			
1.3.17.	Providing secure verification for the end-users.			

[1] Başkent 153 is a Public Relations Application of Ankara Metropolitan Municipality serving to resolve requests, complaints, opinions, suggestions and denunciations

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.3.18.	Mobile application module shall have at least following functions and payment options: 1. Secure customers credit card information through encryption (i.e. AES or 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)			
1.3.19.	Mobile application module shall be Native or Hybrid developed.			
1.3.20.	Unlimited use of licenses to use the Fleet Management Software shall be included in the offer and be charged as a single payment only. Unlimited license of up to 500 bicycles of the Fleet Management Software including all updates and all necessary licenses shall be delivered to Ankara Metropolitan Municipality and General Directorate of EGO.			
1.3.21	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
1.3.22.	All the user data entered, collected or produced by the Fleet Management Software shall be a sole property and under ownership of the Ankara Metropolitan Municipality and Directorate General of EGO. 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.			
1.3.23	Operation system and other needed parts of software shall be set up by the Contractor to the server that is provided by EGO.			
1.3.24	Software shall have both Turkish and English language interface.			
1.4	**Bicycle Counter with LCD display**  * This picture is provided for illustration only.			

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: 8			
1.4.1	The bicycle counter shall count all the bicycles passing by the road where it is mounted and show the number of bicycles on the LCD screen. The counter shall not count pedestrians crossing the road ensuring that only bicycles are counted. Counting shall be done by use of sensors laid on the road or through installed cameras.			
1.4.2	The bicycle counter shall display with minimum 6 digits the number of bikes on the particular day, month and accumulative for the year, for single bike lane (including weekends and holidays).			
1.4.3	• Electric powered. • Battery installed (minimum 1-year battery life).			
1.4.4	The dimensions of the bicycle counter shall be: • Height = 200 cm ±20 cm • Width = 40 cm ±10 cm			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.4.5	The bicycle counter material shall be aluminum frame and shock-resistant polycarbonate graffiti-proof and rust-proof powder coating or of similar, compatible or higher quality/resistance. The bicycle counter shall have IP65 or higher water, dust and rust resistance. The bicycle counter shall be operable in a minimum range of -25/+50 degrees climatic conditions.			
1.4.6	The bicycle counter shall include customized traffic counting software. The software shall be able to generate reports and analyze counting results. The software shall display geographically all the counter locations and operate online. The image to be obtained from the cameras shall be processed and interpreted with artificial intelligence, and a system shall be established to detect only the bicycle.			
1.4.7	The software shall be usable on computer, tablet and smartphone and only require an internet connection for access, data transfer and data analysis. The software shall allow the user to manage counters, analyze data and run reports through to a user-friendly interface. The access to software shall be possible via web browser. There will be no application to download or install on the user's IT system.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.4.8	The software shall meet at least following safety requirements: 1. Secure login: encrypted passwords (MD5 encryption algorithm with cryptographic hashing function or equivalent) 2. Minimum password length: 8 characters 3. Enforced password complexity requirements (must contain at least 2 numeric) 4. Transmission across the network must be secured via SSL (Secure Socket Layer) system with HTTP protocol (with HTTPs) 5. Data must be stored on secure servers in Turkey in accordance with Presidential Decree No:2019/12 published on 30823 numbered, 06.07.2019 dated Official Gazette. 6. Upgrades, bug fixes and patches shall be automatically installed on a regular basis and included in the license.			
1.4.9	The software shall have an alert system available to warn the user of an anomaly and allowing intervention. Alerts shall be sent by e-mail to the user within 48 hours at least in the following cases: 1.Zero data; 2.Non-transmission of data; 3.Data above a configurable threshold; 4.Percentage of variation from the average.			

1.4.10	The software shall have at least following functions for data analysis features: 1.The software main window shall allow to manage counting points. It shall have a dashboard showing main information per counting site, minimally including: • average daily count; • location on a map; • status of data transmission; • type of counter; • installation date; • battery level. 2. The software shall offer the possibility to assign tags to each counting site to easily sort them out for further analysis. 3.The analysis of counting data shall be possible through interface functions, including: • Selection of the period to analyze or compare (minimally with the calendar or the predefined periods: rolling week, previous month, entire period) and the interval (hourly split, daily frequencies) • Selection of the way the user wants to display the counting data (table view, histograms, curve, trends and build an automatic report over pictures and maps) 4.All types of data analysis representations shall be exportable in PNG, PDF, CSV, Word and Excel formats. 5.Function enabling reconstruction of missing data. 6.The possibility to create customized workspace and edit professional reports.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
1.4.11.	Custom logo and design of the counters shall be possible.			

LOT 2: Auxiliary Equipment for Bicycle

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
2.1.	**Bicycle Rack for Busses**  * This picture is provided for illustration only.			
	Manufacturer's name; product model/type:			
	Country of origin:			
	Quantity: 480			
2.1.1.	Bicycle rack for buses shall carry 2 bicycles.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
2.1.2.	The dimensions of the bicycle rack shall be: • Length = 1550 mm ± %5 tolerance value • Width = 800 mm ± %5 tolerance value			
2.1.3.	Bicycle rack shall be installed on the front frame of the buses.			
2.1.4.	Bicycle rack shall be compatible for installing on "MAN Lion's Classic Solo CNG" bus model.			
2.1.5.	Bicycle rack shall be suitable for tire size between 16 inches and 26 inches.			
2.1.6.	Bicycle rack shall have a functionality to lock bicycles.			
2.1.7.	Bicycle rack shall be foldable if there are no bicycle and it can be locked. This shall not hinder the regular operation of the buses.			
2.1.8.	The locking mechanism shall ensure that racks and bicycles shall not be moveable or unlocked during acceleration/ deceleration of the buses.			
2.1.9.	Bicycle rack shall be made of minimum St 37 stainless steel, galvanized or cataphoresis and electrostatically painted.			
2.1.10.	TSE installation report concerning mounting of the racks to the vehicles shall be realized by Contractor.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
2.2.	**Bicycle Ramp for Metro Stations**  * This picture is provided for illustration only.			
	Manufacturer's name; product model/type:			
	Country of origin:			
	Quantity: 1290 pieces (equals 1290 meters) to be installed in 160 sections in 43 Ankara Metro stations (Appendix 4)			
2.2.1.	The bicycle ramp for the metro stations (entrance / exit profiles, floor profiles and hinge profiles) shall be produced with 6063 T5 aluminum (anti-corrosion-stainless).			
2.2.2.	The edge profiles of the bicycle ramp shall be minimum 3mm thick and made with 6060 or 6063 (anti-corrosion-stainless) aluminum.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
2.2.3.	Hinge profile of the bicycle ramp shall be minimum 10 mm thick.			
2.2.4.	Hinge profile of the bicycle ramp shall be modular and combinable.			
2.2.5.	Hinge profiles of the entrance and exit shall be moveable to adopt different slopes.			
2.2.6.	Floor profiles of bicycle ramp shall have a metal non-slippery surface.			
2.2.7.	Thickness of metal non-slippery surface shall be minimum 1 mm.			
2.2.8.	Width of the floor profiles shall be min. 10 cm.			
2.2.9.	External side of the edge profiles shall be painted with reflective yellow paint for warning/safety.			

LOT 3: Bicycle carriage vehicle

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
3.1.	**Bicycle carriage vehicle**			
	Manufacturer's name; product model/type:			
	Country of origin:			
	Quantity: 2			
3.1.1.	The vehicle shall be single cabin (2 seated) cube type of panel van. The carriage area shall be closed type.			
3.1.2.	Closed carriage area shall have minimum 17 m^3 load capacity.			
3.1.3.	The color of the carriage vehicle shall be white.			
3.1.4.	1. Vehicle empty weight shall be minimum 2.100 kg. 2. Load capacity shall be minimum 1.300 kg.			
3.1.5.	The carriage vehicle shall have a slide door with minimum 1.250 mm loading width.			
3.1.6.	The carriage vehicle shall have a back door with minimum 1.500 mm loading width.			
3.1.7.	Wheelbase shall be minimum 3.900 mm.			
3.1.8.	The carriage vehicle shall be left side drive.			

3.1.9.	The carriage vehicle's engine shall be: 1. Diesel: 1.8 to 2.5 Liters, 2. Engine mount: min 4 cylinders, 3. Fuel tank capacity: min 80 liters 4. Engine shall be Euro 6 or better emission 5. Engine power must be minimum 140 HP 6. Torque: max 350 nm			
3.1.10.	The carriage vehicle's transmission shall be: • Min. two-wheel drive, • Min. 6 gears.			
3.1.11.	The carriage vehicle shall have hydraulic or electronic steering wheel with height and depth adjustments.			
3.1.12.	The carriage vehicle's tires shall be tubeless with load range C or higher.			
3.1.13.	The carriage vehicle shall have remote controlled central lock and anti-theft alarm system.			
3.1.14.	The carriage vehicle's steel wheel rims shall be minimum 16 inches size.			
3.1.15.	The carriage vehicle shall have min following safety / security features: 1. ABS 2. ESP 3. ASR 4. HLA 5. Immobilizer 6. Airbag for driver and passenger			

3.1.16.	The carriage vehicle shall have min following audio / convenience devices: 1. Radio 2. Clock			
3.1.17.	The carriage vehicle shall have disc brakes for rear and front wheels.			
3.1.18.	The carriage vehicle shall be provided with road safety equipment (First aid pack, minimum 2 warning triangle, minimum 1kg fire extinguisher, spare wheel) required by TÜV in accordance with highway traffic regulation, 18.07.1997 dated 23053 numbered official gazette. The carriage construction and related approvals must be included in the vehicle registration.			
3.1.19.	The carriage vehicle shall have min following equipment: 1. Internal Navigation 2. Back Parking Sensor 3. Rearview Camera 4. GPS System for Vehicle Tracking			
3.1.20.	The carriage vehicle shall have foldable aluminum ramp suitable for the rear door for easy loading to the vehicle.			
3.1.21.	The carriage vehicle shall have metal shelf with 3-section 200 cm long, 30 cm wide, 40 cm high which shall be placed left - upper side of the van. The metal shelf shall have a locking mechanism.			

LOT 4: IT Equipment

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
4.1.	**Laptop**			
	Manufacturer's name; product model/type:			
	Country of origin:			
	Quantity: 8			
4.1.1.	The CPU benchmark shall be min 11000. https://www.cpubenchmark.net/			
4.1.2.	Memory speed min 2900 MHz.			
4.1.3.	Processor with min 6 cores.			
4.1.4.	Processor base frequency shall be min 2.6 Ghz.			
4.1.5.	Cache shall be min 12 MB.			
4.1.6.	Main memory installed shall be min 32 GB.			
4.1.7.	Memory type shall be DDR4.			
4.1.8.	SSD type hard drive with min 512 GB capacity.			
4.1.9.	Laptop Graphic Processing Unit (GPU) shall be min 4GB GDDR6 memory.			
4.1.10.	Minimum 1 x HDMI output.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
4.1.11.	As a minimum, laptop shall have; • speakers, • wi-fi, • Bluetooth, • web-camera, • 2 x USB 3.0 or latest port, ethernet port.			
4.1.12.	Min 15.6" size monitor supporting 1920 x 1080 resolution.			
4.1.13.	The integrated keyboard of the laptop shall be Turkish-Q and shall have backlit feature. A wireless optical mouse with scroll feature shall also be provided.			
4.1.14.	Shall comply with CE and Energy Star compliance. EPEAT 2019 certified.			
4.1.15.	Laptops shall have licensed latest version of Windows 10 pro or equivalent operating system installed.			
4.1.16.	Laptop shall have an original min 6 cell, lithium ion battery. The original power cord shall be included.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
4.1.17.	Laptop shall be provided with carrying case. Carrying case shall be compatible with the laptop to be purchased. Carrying case shall be shockproof and waterproof. Carrying case shall be held by hand and shall have a shoulder strap.			
4.2	**Mini Projection Device**			
	Manufacturer's name; product model/type:			
	Country of origin:			
	Quantity: 2			
4.2.1.	The equipment shall have compatibility with the following: 1. HDMI, 2. Wireless networking, 3. USB, 4. Remote control (with battery), 5. Battery for operation without a power cord, Speaker.			
4.2.2.	Minimum 20.000 hours light source life.			
4.2.3.	"LED" lamp type and Digital Light Processing (DLP) technology.			
4.2.4.	Minimum 500 lumen brightness.			

1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
4.2.5.	Resolution shall be minimum 1280 x 800 p (WXGA).			
4.2.6.	Maximum 200 mm width x 100 mm height x 200 mm depth sizes.			
4.2.7.	Minimum 10000:1 contrast.			
4.2.8.	Maximum 1,5 kg weight.			
4.2.9.	Shall be supplied with: 1. All including hardware (cables and accessories) for full function of the equipment, • As a minimum, cables shall be HDMI to HDMI, HDMI to USB Type C, Power Cord • Minimum input – output ports (HDMI, USB, audio). 2. Device software.			