

**TECHNICAL SPECIFICATIONİ ""Cycling Routes in Kırklareli and Tsarevo"" Project -
Supply**

No	Final Specification	
1 Definitions	1.1. Smart Bike Rental Terminal	It is the unit that provides intelligent bicycles, parking spaces and users management, which is connected with the industrial computer integrated touchscreen central computer system which enables smart bikes to be rented member cards and city transportation cards.
	1.2. Smart Park	Smart Park It is a device that identifies the identities of bicycles, places bicycles on the user, locks them by taking them from the user, places the bicycles connected to the Smart bicycle rental terminal with the parking control card.
	1.3 Smart Bicycle	Each Smart bicycle that can communicate with the parking control card, which is in constant connection with the management software, with a separate ID number for each bicycle, and can be followed instantly while at the station.
	1.4. Station	Station 1 Smart Bicycle Rental Terminal is defined as a station for a certain number of Smart parks and the whole system that a certain number of Smart Bikes form. 1.5. Mobile Application The mobile application is mobile software that is connected to the whole system and is prepared by the contractor and integrated with the modules that show the member transactions, stations, credit loading and payments made in the system.
	1.5. Mobile Application	The mobile application is a mobile software integrated with the entire system, prepared by the contractor, and integrated with modules that display member transactions, stations and station statuses in the system.
K	2.1. GENERAL CONDITIONS / 2.1.1.	It is the device that enables the identification of the bicycles, the bicycles, which are connected to the central server by the parking control card which enables the bicycles to be taken by the user, locked by the user, and the bicycles which are connected to the information server.
	2.1.2.	N/A

2	PAR	2.2. Body / 2.2.1.	The intelligent bike park main body must be resistant to harsh use, forcing and bumping.
		2.2.2.	The intelligent bike park main body will be made of materials with at least 5 mm aluminum / stainless steel / fiber carbon and / or equivalent strength. A smart bike parking system will not be able to produce this kind of production because of the breakage of the gray cast iron easily.
		2.2.3.	Intelligent bicycle parking dimensions: Height should be at least 70 cm at most 85 cm, width at least 30 cm at most 45 cm, depth at least 20 cm at most 40 cm
2	PARK	2.2.4.	N/A
		2.2.5.	N/A
		2.2.6.	The smart bike park main body should be constructed so that it will not be exposed to the weather due to weather conditions.
		2.2.7.	The intelligent bike park main body cover will be opened and closed using secret keys with encrypted keys
		2.2.8.	Only one smart bike can be locked into each smart bike park
		2.2.9.	Smart bikes can easily be picked up and delivered from smart bike parks with a single action.
		2.2.10.	Smart bicycle parking stand should be hidden inside the door hinges.
		2.2.11.	N/A
		2.3. Electronic Parts 2.2.1	N/A

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2	PARK	2.3.2.	N/A
		2.3.3.	N/A
		2.3.4.	All electronic devices in the parking area must be corrosion resistant.
		2.3.5.	The mechanical processes in the park (bicycle lock, bicycle lock, etc.) must be transmitted to the center and all log operations should be done.
		2.3.6.	When the station locks in the parking spaces, the information that the bicycle locks on the system will be recorded. The locking mechanisms will detect the locking by the sensor connected to the parking control card.
2	PARK	2.3.7.	The electronic control card located on the bicycle parks located in the station must be structured to provide both bicycle locking (sensor detection and locking mechanism operation) and reading of the magnetic card on the bicycle. Sensor detection, activation of the lock mechanism and card reading will be done with one device, not with individual devices.
		2.3.8.	N/A
		2.3.2.1	When the user receives or delivers the bike (user ID, bike ID, date-time information, Smart bike rental terminal ID information, parking ID information) via the parking control card, it will be transmitted to the central database via the kiosk terminal and recorded.
		2.3.2.2	There will be a park control card on the park.
		2.3.2.3	13.56 Mifare card reader technology.
		2.3.2.4	TCP/IP ve RS485 bağlantısı desteklemelidir.
		2.3.2.5	Must have the ability to work online.
		2.3.2.6	N/A

2	PARK	2.3.2.7	N/A
		2.3.2.8	N/A
		2.3.2.9	The device must be able to operate at a temperature of -25°C/+75°
		2.3.2.10	The device must be protected against high voltage..
		2.4.Bike Lock System	Intelligent bicycle parking lock will be in a structure in the main body.
		2.4.2.	The locking system must be able to lock the bicycle securely to the park.
		2.4.3.	The user must be able to lock the bicycle to the park in a simple manner with a single move
		2.4.4.	The locks must have a structure that meets these requirements, taking into account the fact that they will be found outside and the number of uses is high
		2.4.5.	The user must be able to deliver the bicycle when the power is cut off and the power supply is exhausted, and the locking system must be able to continue operation.
		2.4.6.	The locking system must be constructed from an external intervention. It should be fixed with at least 4 metric screws and these screws should not be visible from the outside.
3.	CYCLING	3.1. BODY 3.1.1.	Electronic components such as intelligent bikes, all gears, chains, front and rear braking devices, shift gears, dynamo gear, cable and steel wire components (brake wires, gears, electric wires, etc.) will not interfere with use, will not interfere with the user and will not be damaged by minor damage.
		3.1.2	The bicycle will be made of cast aluminum material.
		3.1.3	Bicycle tire rims will be at least 26 inches.
		3.1.4	Bicycle chain will be provided.
		3.1.5.	The bicycle will be a springy saddle. this saddle should not be removed by the user.
		3.1.6.	Bicycles will have a dynamo arrangement of at least 6 watts.




3. CYCLING	3.1.7	The bikes will have 26 inch fenders on the front and rear tires.
	3.1.8.	There will be 1 basket at the front of the bike.
	3.1.9.	Each bicycle will have an electronic ID. When bicycles are placed in parks, the system automatically recognizes which bicycles they are coming from and the bike that was previously assigned to the user will be automatically transferred into the
	3.1.10.	Smart bikes will have an illumination light at the front and a red reflector at the rear.
	3.1.11.	The tires of intelligent bicycles are air-inflated and will be of sufficient strength to suit the needs of a large number of users.
	3.2. Brake Gear System /	The bicycle gearbox will have at least 3 gearbox gearbox system.
	3.2.2	The bicycle will be the brake brake system. The disc braking system (rotor brake) will not be regarded as the hub brake.
	3.2.3	N/A
	3.2.4.	Parts such as screws, salmon, etc., which will be used for mounting gears and braking systems, will be used with parts protected against external interference.
	3.3. Locking System /	The locking system on the bicycles will be designed according to the lock system in the park.
	3.3.2.	The locking system must be resistant to harsh use, forcing and bumping.
	3.3.3.	The locking system should not constitute a structure that would disturb the bicycle user in any way.
	3.3.4.	The kite system should not be in a structure that would damage the other party in the event of an accident.
	3.4. Advertising Areas / 2.1.1	There will be double-sided advertising space to cover half of the rear wheel of the bikes. The material strength used by this advertising area will be produced from a durable material. The outer surface will have a shiny structure.
	3.4.2.	On the front wheel of the bicycles, there will be an advertising space to cover one-third so that the user will not lose his balance from the wind.
	4.1. SMART BIKE	The Smart bicycle rental terminal will be provided by the operating system license project company located on the computer.

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4. SOFTWARE	4.1.2. Smart Bike Rental Terminal	The smart bike rental terminal software should be in charge of the contractor's production and responsibility.
	4.1.2.2.	The smart bike rental terminal software will be connected to the center online.
	4.1.2.3.	N/A
	4.1.2.4.	If there is no operation in any page other than the main menu within the period to be specified from the administration panel, the software will automatically close the page and return to the main menu.
4. SOFTWARE	4.1.2.5.	The software will transfer all kinds of operational information (rental, money collection and security back, etc.) to the central server via online connection.
	4.1.2.6.	Users must be able to sign up for a credit card bike rental system.
	4.1.2.7.	Users that do not have a member card will have opportunity to use it free of charge via the terminal by phone approval and MERNIS inquire.
	4.1.2.8.	N/A
	4.1.2.9.	N/A
	4.1.2.10.	If it is, it must be integrable with transport cards used by the city.
	4.1.2.11.	N/A
	4.1.2.12.	N/A
	4.1.2.13.	The terminal software should display the parking status of other terminals.
	4.1.2.14.	If all the parks connected to the station are full, the user should be in a structure to give additional time.

4. SOFTWARE	4.1.2.15.	Users that do not have a member card will have opportunity to use it free of charge via the terminal by phone approval and MERNIS inquire.
	4.2. Management Software	It is related software prepared by the contractor to manage, control, analyze and perform all data entry processes.
	4.2.1. General Conditions	The management software must be under the responsibility of the contractor's production.
	4.2.1.2.	It will have an easy-to-use visual interface for Authorized Users.
	4.2.1.3.	The software must be updatable.
	4.2.1.4.	Any changes requested by the Contracting Entity must be made by the contractor.
	4.2.1.5.	Management software can be controlled by administrative staff independently from the manufacturer.
	4.2.2.	Must be able to identify members.
	4.2.2.2.	Bicycle should be able to identify.
	4.2.2.3.	You should be able to download credits to your account.
	4.2.2.4.	Administrative software users should be able to be identified.
	4.2.2.5.	The hourly rate for bicycle use must be defined.
	4.2.2.6.	Payment types must be identifiable.
	4.2.3. Reporting	Reporting in the management software will be flexible and useful.
SOFTWARE	4.2.3.2	Bicycle rental incomes should be reported.
	4.2.3.3	Member records should be reported.
	4.2.3.4	Bike usage between stations should be reported.
	4.2.3.5	All logs generated in the system should be reported.
	4.2.3.6	If requested, the sub-structure of the system is available, the requested reports will be provided by the contractor other than the existing reports.
	4.2.4. Mobile Information System	Mobile information system includes text messaging, e-mail, information systems.

4.5	4.2.4.2	The mobile information system will work integrated with intelligent bicycle system management software.
	4.2.4.3	The integration of all the messages that occur in the intelligent bicycle system will be done.
	4.2.4.4	When the bicycle is forcibly taken.
	4.2.4.5	When renting bicycles.
	4.2.4.6	When the bike is delivered.
	4.2.4.7	In the case of Smart Park related changes
	4.2.4.8	In the case of intelligent cycling station changes.
	4.2.4.9	The name should support special information.
4. SOFTWARE	4.2.4.10	From the intelligent bicycle system, all desired alerts such as the number of bicycles in the station, the station disconnect warning, the park disconnect warning, etc. will be reported via SMS / e-mail
	4.2.4.11	These notifications can be restricted on administrator / paypal / user / event basis,
	4.2.4.12	The mobile information system will be integrated into the intelligent bicycle system.
	4.2.5. Bank Integration 4.2.5.1.	N/A
	4.2.6. Financial Invoice Integration	N/A
	4.2.7. Emergency Alert Notification System 4.2.7.1.	In the software, the emergency alert follow-up module (bike number level warning on the station, station disconnect warning, user emergency aid warning, station parking warning). The notification of these alerts will be provided automatically by the system to other relevant personnel via SMS / email / web. Relevant personnel will be able to forward transactions that they apply to incoming alert messages to the headquarters online via sms / email / web.
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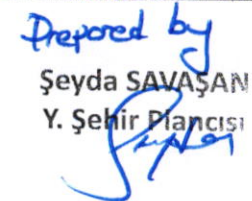



4. SOFTW	4.2.8. User Authority Control	Users defined in the management software should be able to define authorization for each module individually.
	4.2.8.1.	
	4.2.9. Mobile Software	The mobile software system prepared by the Contractor shall be used free of charge in the warranty period.
	4.2.9.2.	The contractor has the right to make any changes in the mobile software.
5. TRAINING	5.1. TECHNICAL EDUCATIO	The project firm will give the technical training of all materials to the related institution within the period approved by the Contracting Entity.
	5.2. TERMINAL SOFTWARE	The project firm will provide terminal software training to therelevant institution within the period approved by the Administration.
5. TRAINING	5.3. MANAGEM ENT SOFTWARE	The project firm will provide the management software training to the persons determined by the institution managers to the related institution within the period approved by the Administration.
6. ANALYSIS AND STUDY	6. ANALYSIS AND STUDY	The contractor is obliged to carry out analysis work from the projectarea. This analysis will be a guide to the development of the project or the establishment of a transport network.
	6.1.2.	The contractor will ensure that problems, deficiencies and faults in the existing structure are identified.
7. GENERAL CONDITIONS	7.1. RESPONSIBILITIES OF THE CONTRACTOR	After the dive, all details of the smart bike rental system to be built will be prepared by the project contractor, before making a contract, the contracting authority must show a station sample. If deemed appropriate by the contracting entity, the contractor is invited to the contract. in addition to the contract with the contract, the detail of the intelligent bicycle rental system will begin to be manufactured in accordance with the contractor contract and annex after the project has been signed.
	7.1.1.	All materials and colors used in the manufacture of the productsto be used in the intelligent bicycle rental system will be in international standards.

7. GENERAL CONDITIONS	7.1.2.	At the locations determined by the contracting authority, the detailed project details of the approved smart bike rental system will be applied exactly. the operation of the intelligent bicycle rental system will be completed by completing the production according to the detailed project of the intelligent bicycle rental system approved by the administration and making the mechanical installation to the places shown and making them work.
	7.1.3.	No smart bicycle rental system will be put in place and their place will not be replaced at all without the approval of the administration.
	7.1.4.	At the appropriate location of each smart bike rental system element, the official logo of the smart bike rental system will be found and numbered by the contractor. Intelligent bicycle rental system will be submitted to the administration listing the locations and numbers of the elements.
	7.1.5.	Where intelligent bicycle rental terminals are located, infrastructure facilities will be installed for intelligent bicycle parking station to be additionally provided by the administration in the future.
	7.1.6.	The contractor shall provide necessary trainings to the technicians who will be in charge of the business to be determined by the administration when the operator is to be carried out by the administration.
7. GENERAL CONDITION	7.1.7.	The contractor has to provide spare parts belonging to all products in the system. The contractor will supply the spare parts requirement from the users. The contractor will deliver the spare parts price list to the authority.
BICYCLE TERMS OF USAGE	8.1.	The smart bicycles, within the scope of our Project, will be presented to the publics use totally free of charge. Terms of use will be; identification card of the tourists wanting to use the bicycle will be, requested by the person responsible of the bicycles. The tourist that hands over their identity card will use the bicycle free of charge and there will be no restrictions of usage. The tourist that uses the bicycle will come to the bicycle park area and will receive its identity card back after delivering the used bicycle.

Approved by

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