

# Other Tender Forms

## ANNEX I COMPLIANCE CHECKLIST FORM

The list will be filled-in by the tenderer and it will be presented along with the tender.

The requirements shall be read in conjunction with the information provided in relevant paragraph of the Supply Requirements. Whenever discrepancies between the two parts are noted, the provisions of Supply Requirements shall prevail.

Number / Chapter	Description	Specification requested (the requirement shall be read in conjunction with the requirements in the Supply Requirements)	Detailed description of the essential technical and performance characteristics of the Goods offered	Paragraph-by-paragraph commentary on the Purchaser's Supply Requirements
<b>1. GENERAL REQUIREMENTS</b>	<b>Latest version equipment</b>	Where applicable, the tenderers will provide the latest version of the buses main components and systems		
	<b>1.1 Laws and directives</b>	According to the legislation, regulations and standards from Romania and from the EU		
	<b>1.2 Dangerous materials</b>	The list of all dangerous materials, whose usage was provided in the tender will be presented		
	<b>1.3 Transportation conditions</b>	Slopes exceeding 14% and Curves with external radius of 12.5 m.		
	<b>1.4 Meteorological conditions</b>	Min – 35°C Max 40°C		
	<b>1.5 Route Suitability</b>	Front and rear access angle, as well as the ground clearance		
	<b>1.6 Admissible noise</b>	Regulation EEC-UNO 51 or 70/157/EC		

	<b>1.7 Quality, anticorrosive protection</b>	<p>Without significant works and general repairs following the corrosion throughout the exploitation life of the bus (12 years) (also provide a description and a schedule).</p> <p>It is necessary to present the description of the recommended preventive measures and their periodicity for the protection against corrosion of the vehicles.</p>		
	<b>1.8 Maintenance intervals</b>	<p>At least 40,000 km (2300 – 2500 working hours).</p> <p>The supplier has to present the forms for all the service intervals and the list of operations and works which are provided according to the maintenance technology and periodicity of works.</p>		
		Provide maintenance forms and technology		
<b>2. MAIN DIMENSIONS</b>	Length	<p>Overall length:</p> <p>a. Midi-buses: between 9,400 mm and 10,900 mm</p> <p>b .Standard buses: 12,000 (mm) +/- 350 mm</p> <p>c. Articulated buses: 18,000 (mm) +/-400 mm</p>		
	Width	2 500 mm +/- 50mm (without the rear-view mirrors)		
	Height (with air	Max. 3 150 mm		

	conditioning installed)			
	Minimum turning radius	Max.12.5 m		
	Front arm	min.2.600 mm		
	Rear arm	min.3.200 mm		
	Number of doors (on the right side)	a. Midi-buses: minimum 2 double b. Standard buses: 3 double c. Articulated buses: 4 double		
	Configuration of doors	Minimum width 1200 mm		
	Tyres	275/70 R 22,5 „M+S” „City Urban”		
	Capacity ( number of passengers)	a. Midi-buses: Min. 70 b. Standard-buses: Min. 96 c. Articulated-buses: Min. 135		
	Mass characteristics	Net weight according to the Directive EC/27/1997, (kg );  The total weight of the vehicle does not have to exceed the legal regulations ("Regulations regarding the distribution of weights of the motor vehicles and trailers with engine and the technical conditions for vehicles in traffic").		
	Maximum floor height (not in the area of bridges or of the engine)	max 340 mm		
	Frontal access angle	min 7°		

	Rear access angle	min 7°		
<b>3. PROPULSION SYSTEM</b>	<b>3.1 Engine</b>	Approved by EEC-UNO, It has to comply with the standards Euro 6 Stage C regarding the emissions, proved through the submission of the type approval certificate issued by RAR or through a EU approval certificate, along with the certificate of conformity CoC issued by the manufacturer.		
		Engine type: Diesel with 4 stroke		
		Cold Start Temp -35 °C		
		European standard –Euro 6 Stage C		
		Cylinder no.: minimum 5		
		Power a. Midi-buses: min. 190 KW b. Standard-buses: min. 200 KW c. Articulated-buses: min. 220 KW		
		Maximum torque is reached at 1100 – 1500 rpm or 1200 – 1600 rpm		
		Replacement period of the engine oil No less than 40 000 Km (or 2300-2500 operating hours)		

		<p>Energetic and environmental impact</p> <p>According to the Emergency Ordinance No. 40/20.04.2011 regarding the promotion of non-polluting rail road transportation vehicles and efficiency from the energetic point of view, the energetic operational and environmental impact will be evaluated.</p>		
		<p>Energetic impact</p> <p>The tender will mandatory include the tests SORT1 for the model of tendered bus, equipped with the engine, gearbox, transmission and other endowments from the tender. The tests SORT 1 will be conducted and certified by an authorized body from the European Union.</p> <p>The fuel consumptions obtained following the test SORT 1 will be compared. The fuel consumption declarations will be attached – <b><u>(Model: Annex no. II, Other Tender Forms: Declaration of Fuel Consumption)</u></b></p>		
		<p><b><i>Environmental impact</i></b></p> <p>The costs with the pollutants calculated according to the model recommended by UITP&amp;ACEA will be compared – <b><u>(Model: Annex no. III, Other Tender Forms: The Operational Lifetime Energy and</u></b></p>		

		<p><b><u>Environmental Impact Cost)</u></b></p> <p>The offer will include the EC certificates concerning the toxicity degree and the environmental protection of the materials used according to the technology of the engine type.</p> <p>The engine will be compatible for operation with diesel and biodiesel fuel according to the requirements of the European legislation. According to the Directive EC/30/2003 and to the normative acts and laws in force in Romania, the transportation operators are compelled to use the biodiesel fuel in certain percentages.</p> <p>The tendered engine will have to observe the requirements of the European legislation concerning the obligation of fuelling and operation with biodiesel fuel.</p> <p>The tenderer will insure the adequate operation of the engine under the usage conditions of biofuels, without additional costs for the purchaser, with the observance of the warranty conditions, for which it will sign a firm undertaking.</p> <p>The engine compartment will be executed in a manner in which it would insure sufficient spaces for the easy access and facile disassembly of the related aggregates of the engine, gearbox and of the other subsystems.</p> <p>Engine cooling system - Easily</p>		
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		approachable, with optical and acoustic warning		
		<p><b>3.1.1 Inlet plug</b></p> <p>The minimum height of the inlet plug has to be at least 1.4 m above the ground. As a proof, it is necessary to present a technical drawing indicating the distance between the air plug and the ground, for the tendered vehicle.</p>		
		<p><b>3.1.2 Air filter</b></p> <p>The air filter will be type dry, with the indication of its contamination on the dashboard.</p> <p>The minimum replacement period of the air filter – minimum 40.000 km covered.</p> <p>The supplier mentions the authorized filter manufacturers for the usage on the tendered vehicles.</p> <p>As proof for the period proposed for the replacement of the air filters, the tenderer has to present a certificate of the maintenance instructions or an excerpt of other relevant documents.</p>		
		<p><b>3.1.3 Engine cooling system</b></p> <p>The engine cooling will take place with mixture of water and antifreeze liquid. The coolant expansion tank should be made of non-metallic</p>		

		<p>materials.</p> <p>The piping of the cooling system has to be manufactured from and anticorrosive material:</p> <p>rubber gaskets with additional thermal insulation bands.</p> <p>The access to the radiator has to be facile, for its replacement and cleaning. The radiator of the inlet air (intercooler) has to be located in a manner in which it would allow the access without disassembly. The addition of antifreeze liquid must not be performed from the passenger compartment.</p> <p>If the system does not have sufficient cooling liquid, an optical and acoustic signal has to activate on the driver's dashboard.</p> <p>A protective cover has to exist under the engine compartment.</p>		
	<p><b>3.2 Transmission</b></p>	<p>The gearbox has to be automatic, with electronic command, with incorporated retarder, with 6 gears for forward movement and one for reverse.</p> <p>Oil replacement period of at least 90.000km covered.</p> <p>As proof of the period proposed for replacing the oil in the gearbox, the tenderer has to present an excerpt with the maintenance instructions or other relevant document, as well as requirements regarding the quality and type of the oil used.</p>		

	<b>3.3 Drive shaft</b>	Life expectancy: Min. 200.000 Km. declare the greasing intervals of the drive axle (if applicable)		
<b>4. SUSPENSION</b>		Vehicle suspension ECAS right side tilting system. Suspension type – pneumatic		
<b>5. STEERING SYSTEM, WHEELS, BRIDGES</b>	<b>5.1 Steering system</b>	Servo type (power assisted), which provides a better manoeuvrability of the vehicle  Testing connections will be provided in order to measure the oil hydraulic pressure.  The steering wheel will be provided with the adjustment possibility on vertical and horizontal plan according to the requirements of the driver.  The adjustment function will be inactive (blocked) while the bus is circulating. The steering arm will be provided with a damping system and it will have the diagnosis possibility. The steering box and the power-assisted steering, as well as the spherical joints of the steering mechanism must be of type “without maintenance” for minimum life time of 300,000 km		
	<b>5.2 Pneumatic installation (compressed air production system)</b>	Approved according to EEC-UNO Regulation no. 54 or 92/23/EC. Specifications about the oil separator and air dryer. Hoses and pipes resistant to		

		<p>corrosion.</p> <p><b>The pneumatic installation will work properly even in very low temperature up to -32 degrees Celsius, without any condensations or ice caps. The tender must include a written description of how the delivered buses will be able fulfil this mandatory requirement.</b></p>		
	<b>5.3 Tyres</b>	<p>Approved by the Regulation EEC-UNO 54 or 92/23/EC (tubeless radial Tyres type - CITY URBAN). M+S 275/70 R22.5</p> <p>Spare Tyre of the same type</p>		
	<b>5.4 Axles</b>	<p><b>5.4.1 Rear Axle.</b></p> <p>It will be compact, type carter, with axle drive bevel pinion with hypoid gearing, with ABS/ASR endowment. The bridge with planet reductor in the wheel hub is not accepted. The crankcase of the bridge will be provided with places marked for the suspension of the vehicle.</p> <p>The tenderer will present in its tender the type of the driving axle, detailing its technical characteristics.</p> <p>The tenderer has to provide data about the quantity, type and quality of the engine used in the differential driving gear.</p> <p>The minimum replacement period of the oil has to be 120,000 km covered.</p>		

		<p>As proof of the period proposed for replacing the oil in the differential driving gear, the tenderer has to present an excerpt with the maintenance instructions or other relevant document, as well as requirements regarding the quality and type of the oil used (in Romanian language).</p> <p>Rear bridge: compact, equipped with ABS/ASR</p> <p><b>5.4.2 Front bridge</b></p> <p>Preferably rigid, or independent semi-bridges, with marking for wheel lifting</p>		
<b>6. BRAKES</b>		Approved on vehicle according to UN ECE 13 or 71/230/EC.		
	<b>6.1 Service brake system</b>	<p>All the wheels should have disc brakes, with automatic adjustment (requiring no adjustment during the operation). The braking system has to be exclusively designed as a system with compressed air.</p> <p>The service brake will include two independent pneumatic circuits on each axle, with action on brake disks, with visualization of the operating pressure on the dashboard, with electronic system (anti-locking ABS and anti-sliding ASR and with braking pressure according to the load of the bus and other incorporated functions).</p>		

		The manufacturing solution will allow the diagnosis, control and reestablishment of the parameters through the network CAN Multiplex.		
	<b>6.2 Brake pads</b>	<p>Brake pads of the same type and manufactured by the same manufacturer which were approved according to the regulations EEC – UNO no. 13 or 71/230/EC have to be assembled on all the vehicles delivered.</p> <p>The dash panel has to contain a brake pad wear indicator.</p> <p>The exploitation life of the brake pads must not be less than 50.000 km covered for both axles of the bus.</p> <p>The brake disks must have a life expectancy of no less than 250 000 km</p>		
	<b>6.3 Hand (parking) brake</b>	<p>Parking brake with spring activation and pneumatic command on the rear bridge. It is necessary to provide a release mechanism for the unpredicted situations.</p> <p>An acoustic warning means will be provided in case the stationing brake is not activated after parking and stopping the engine.</p> <p>The acoustic signal will be heard in all the operation stages if the parking brake is not activated when the contact key was withdrawn. The acoustic signal will be activated if</p>		

		the operation pressure was not reached.		
<b>7. GENERAL TECHNICAL CHARACTERISTICS AND OPERATING REQUIREMENTS OF THE AGGREGATES, SUBSYSTEMS AND COMPONENTS</b>	<b>7.1 Chassis, vehicle body, exterior coating, paint</b>	<p>Manufacturing of the vehicle body will be performed according to the regulations ECC – UNO in force.</p> <p>The vehicle body must be secured against cracking, deformation, tearing, throughout the entire useful life of the bus (minimum 12 years).</p>		
		<p>The sub-frame has to be manufactured in a manner in which it would ensure the same resistance to corrosion without treatments against corrosion throughout 12 years.</p> <p>The supplier shall provide a description of the specific procedure for anticorrosive protection and the technical data sheet of the materials used. It shall also detail the anticorrosive treatment manner, the number of layers and their thickness for the steel vehicle bodies.</p> <p>If closed profiles are used, their internal protection will be detailed.</p>		
		<p>Side panels - The external side coating of the car body can be made of glass-fibre panels, stainless steel, aluminium or galvanized steel plate, fixed through soldering, insulated on the interior with sound-absorbing and isothermal materials, easily dismountable. The warranty of the</p>		

		<p>external side coating will be at least 10 years.</p>		
		<p>Vehicle colour - The materials used will observe the directive VOC 1999/13/EC.</p> <p>The supplier will describe in detail the anticorrosive protection and painting system applied in order to achieve the useful life of the vehicle.</p> <p>The painting and anticorrosive protection system will allow the washing through revolving brushes, with water jet and cleaning substances, being resistant to sun radiations, UV, ozone, polluting agents and the previously mentioned environmental conditions.</p> <p>The cover system will allow the application of advertising on self-adhesive foil without deteriorating their repeatedly ungluing and replacement.</p> <p>The tenderer will attach to its tender the reestablishment technology of the anticorrosive protection and painting if certain traffic accidents take place, by mentioning the materials which have to be used and their technical specification.</p> <p>The coatings, both the anticorrosive</p>		

		protection coatings and the decorative coatings, will be mentioned in the manufacturing and technological documentation of the bus.		
		<b>The buses will be equipped with two towing hooks, one for the front side and one for the rear side.</b> The rear crook must be able to ensure the towing of a light trailer ( of maximum 750 kg)		
	<b>7.2 Windscreen and windows</b>	Windshield - Approved according to the regulations EEC-UNO nr.43 or 92/22/EC  The windshield must be of a single piece, duplex glass and with heating system incorporated.		
		The side windows will have a transparency index of approximately 70% on a certain colour shade  The side windows have to be manufactured from secured glass.  The side windows need to be able to partially open through flipping (hopper windows) in order to allow the ventilation if the air conditioning installation is not functioning.  The supplier shall mention in its offer the total number of windows and present a technical drawing illustrating this aspect.		

		<p>The left side window of the driver will be sliding, heated and provided with adjustable sunshade for at least 2/3 of its surface, without preventing the driver's visibility towards the right rear-view mirror.</p> <p>A plastic deflector will be assembled near the window, whose dimension does not affect the width of the vehicle.</p> <p>The bus has to be provided with emergency exits according to the law, which have to be adequately and clearly marked, and their opening method would be marked in Romanian language.</p> <p>The necessary emergency equipment (hammer, cable, etc.) also needs to be provided near all the emergency exits.</p>		
		<p>The windscreen, back window and side windows will be assembled through soldering.</p> <p>The soldering system will be resistant to temperature variations, light, UV, polluting agents and it will be guaranteed for the entire 12-year useful life of the bus.</p> <p>The windscreen should be one part from duplex glass and it has to ensure the visibility from the driver's seat of 180 degrees, with a transparency of at least 75%.</p>		
		<p>The door glass has to be manufactured with the same transparency index as the lateral</p>		

		<p>windows for the sun ray protection.</p> <p>The glass will be soldered on the door frame and it will be manufactured from secured glass.</p> <p>The windows will be protected with hand rails towards the passenger compartment</p>		
	<b>7.3 Access doors</b>	<p>Doors - Double electro pneumatic on the right side of the bus.</p> <p>Minimum width: 1.200 mm</p> <p>Minimum height of the doors: 1.900 mm</p>		
		<p>The doors have to open and close through individual command from the dashboard.</p> <p>The two folds of each door have to open and close simultaneously and to be provided with a limitation system of the closing force for the protection of the passengers (limitation of the automated closing and opening force when an obstacle is encountered and protection when doors are opened by the passengers while the bus is driving).</p>		
	<b>7.4 Auxiliary platform (railing) for wheelchairs and carts</b>	<p>According to the European Directive 2001/85/EC.</p> <p>Positioned at door II with manual mechanism and capacity of at least 300Kg.</p>		
	<b>7.5 Lighting system</b>	<p>According to the internal and international standards and</p>		

	<p><b>and exterior lights</b></p>	<p>regulations (EEC-UNO no. 48 or 76/756/EC).</p> <p>The lateral and the fender lamps will be type LED, in order to insure an increased reliability.</p> <p>The external lights and the lamps will have sealed enclosures and where possible elimination points of steam. The installation will also include fog flashlights.</p>		
	<p><b>7.6 Windscreen wiping and washing installation</b></p>	<p>With speed control system both for continuous operation and for intermittent operation, with adjustable time frame.</p> <p>The installation will allow the visibility for the wiping and washing function both on the left and on the right side of the windscreen with a conjugated mechanism.</p>		
	<p><b>7.7 The supply and distribution electrical installation</b></p>	<p>All the electrical panels will be have a sticker in Romanian with diagram information about the fuses and the connections.</p> <p>The electrical installation will function at 24V. The batteries will be the Super Heavy Duty type with low maintenance requirements. The battery compartment must be ventilated.</p> <p><b>The main parameters of the battery should be the normal tension 12v , the minimum capacity minim (215-225Ah).</b></p>		

	<b>7.8 Centralized greasing installation</b>	<p>Automatic greasing installation, monitored on the on-board computer.</p> <p>List comprising the quantities, type and specification of the products used, their manufacturers, the periodicity of the greasing operations, the necessary filters, etc. If possible, several variants will be indicated.</p>		
<b>8. INTERNAL CONDITIONS</b>	<b>8.1 Mechanical conditions</b>	Noise level - According to the European regulations for buses EEC-UNO R 51.		
		<p>The level of shocks, vibrations and noise will be supported through the documentation from the tender.</p> <p>Shocks and vibrations According to the European regulations for buses EEC-UNO R66;</p>		
	<b>8.2 Passenger compartment</b>	<p>Safety area correspondingly marked according to the existing regulations, for the individuals in wheelchairs.</p> <p>The wheelchairs have to be secured through belts installed in the vehicle.</p> <p>Potential bidders must meet all the other standards, norms and regulations that were required in Part 2, Requirements, paragraph 1.1, Laws and directives in force at the time of the approval and certification, including ECE 107.</p> <p>A "STOP" button is installed in this</p>		

		area through which the driver is informed about the descending intention of the disabled passenger		
	<b>8.3 Passenger seat</b>	<p>The positioning of the seats will be according to Directive 97/27/ EC and Directive 2001/85/EC or R107</p> <p>Type self-supporting, assembled in console, manufactured from rough plastic (expanded plastic is not allowed), in the anatomical form as individual seats.</p>		
		<p>Seat positioning - The tenderer has to present a seat positioning drawing and alternative solutions, Seats number: a. Midi-buses: Minimum 17 b. Standard-buses: Minimum 20 c. Articulated-buses: Minimum 32</p>		
		<p>Seat design - The seats for parents with children and disabled individuals marked in a different colour, minimum width 440 mm, the backrest needs to have guardrails. The purchaser will decide the selection of colours for all the seats.</p>		
	<b>8.4 Bars, support handles and other internal arrangements</b>	<p>Conditions EEC-UNO R 36 regarding the positioning.</p> <p>Vertical and horizontal bars with diameter min.20 mm – max 45 mm. Anti-sliding surface. Stop button near the doors.</p> <p>Internal colour established with the purchaser.</p>		

	<b>8.5 Floor</b>	Waterproof, manufactured from a material which would prevent sliding WBP and EN 314 Class 3		
		<p>The soundproofing of the floor will be executed, including the rear part and the passages area.</p> <p>The entire vehicle must be free of obstacles which would prevent free passage of the passengers.</p> <p>The anti-sliding lining will have the following characteristics:</p> <ul style="list-style-type: none"> <li>• The WIDTH will be at least 2 mm;</li> <li>• The SPECIFIC DENSITY will be at least 2Kg/mp;</li> <li>• The INFLAMMABILITY of the coating will comply with UN ECE 118 or 95/28/EC</li> <li>• The SLIDING/GRIP of the floor will comply with: EN 13845 Esf, DIN 51130 R10 and ISO 9352</li> </ul> <p>If not in a single piece, the covering should be welded on the reverse so that the joining points prevent water penetration (the method of jointing must be specified in the response).</p>		

	<p><b>8.6 Provision of microclimate during summer (air conditioning)</b></p>	<p>Sufficient capacity in order to satisfy the cooling and heating throughout the entire saloon of the vehicle.</p> <p>The system will allow the possibility of adjustment in at least two stages both of temperature and of debit of independent air for the driver's cab and for the passenger compartment.</p> <p>A ventilator powered by electric engine without bushes and collector will be provided for the exhaust of polluted air and condensation of the bus.</p> <p>The driver's cab and the passenger compartment need to have separate ventilation and adjustment.</p> <p><b>The provision of the air conditioning must be monitored and controlled also remotely, from the central dispatch (for passenger compartment)</b></p> <p>In order to provide the natural ventilation, the bus will be equipped with at least 5 windows and 2 shutters on the roof with manual opening.</p>		
	<p><b>8.7 Provision of microclimate during cold weather (heating of the vehicles)</b></p>	<p>To comply with UNO ESE 122 or 2001/56/CE.</p> <p>The operation of the preheating aggregate will be electronically programmable and it will be integrated with the general air conditioning system both during cold and warm weather.</p> <p>The command system of the</p>		

		<p>preheating aggregate has to be integrated with the general management and electronic diagnosis system of the bus.</p> <p>A diagnosis and measuring device of the fuel consumption will be delivered for the preheating aggregate, along with the necessary accessories.</p> <p>The heating installation has to ensure in the passenger saloon a minimum temperature of +15 degrees C at a temperature of the exterior environment of -15 degrees C.</p> <p>The heating of the driver's cab and the defrosting of the windscreen will be performed from the joint cooling installation of the engine and of the preheating aggregate.</p> <p>The distribution of the hot (cold) air will be uniform on all the areas of the driver's cab (three-dimensional distribution), but also with the possibility to select the distribution area of the hot (warm) air.</p> <p>The heating of the windscreen will ensure the normal visibility at the temperature of -35 degrees C. The ventilators from the forced convection air heaters both from the saloon and from the driver's cab will have engines without brushes and without collector.</p> <p>The heating of the vehicle has to be type radiator or heater.</p> <p>Thermostats have to be assembled,</p>		
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		<p>which would control the temperature from the saloon and from the driver's cab.</p> <p>The heaters from the saloon will be installed in a manner in which they will allow the washing and cleaning of all surfaces without their disassembly.</p> <p>The offer will include drawings of the positioning of the heating installation inside the vehicle.</p>		
	<b>8.8 Lighting system within the bus</b>	<p>The lighting within the dash panel of the driver and of the passenger compartment will be preferably performed with LED lamps in order to obtain an increased reliability</p> <p>Anti-vandalism lamps.</p> <p>The lighting within the dash panel of the driver will have separate command for operation, at his requirement. The lighting in the passenger compartment will have at least two stages which will be manually commanded by the driver.</p>		
<b>9. SAFETY AND SECURITY</b>	<b>9.1 Door security</b>	<p>In case of emergency, the doors have to be opened from the interior and from the exterior, even if they are not supplied with electrical energy. Red inscription in Romanian "ACTIONARE IN CAZ DE URGENTA" and in English "POWER IN CASE OF EMERGENCY".</p> <p>Opening allowed only after the stop of the vehicle, and the bus will be provided with a device which would</p>		

		not allow its movement when the doors are opened.		
	<b>9.2 Security exits</b>	The bus will have at least 5 security exits. Their dimensions, positioning and marking have to comply with the European regulations in force. Equipment with hammers for breaking the windows considered to be security exits  Marked and written in Romanian and English language.		
	<b>9.3 Engine compartment</b>	Fire warning system.  Sound and thermal insulated covers, manufactured from fireproof materials. Access covers within the passenger compartment protected against opening and vandalism.		
<b>10. MIRRORS</b>	<b>10.1 External mirrors</b>	The mirrors have to comply with the Regulation EEC-UNO 46 or 2003/97/EC. The bus needs to have two external rectangular mirrors with heating and adjustment. The external mirror from the right side has to allow the observation of the areas around the doors and the passage of the wheels.  The minimum height of the lower point of the rear-view mirror has to comply with the Regulation EEC-UNO 46 or 2003/97/EC.		
	<b>Internal mirrors</b>	Internal mirrors have to be also		

		<p>assembled in the passenger compartment:</p> <ul style="list-style-type: none"> <li>• a mirror located in front of the driver in the middle,</li> <li>• a mirror in the upper right corner for the visualization of the front door area and the area of the other access doors.</li> </ul>		
<b>11 DRIVING CAB OF THE DRIVER</b>	<b>11.1 Driver's seat</b>	<p>Front- back, vertical and lumbar adjusting seat, pneumatically or hydraulically controlled and self-adjustable according to the driver's weight. Provided with headrest and armrests.</p>		
	<b>11.2 Driver's cab</b>	<p>The driver's space will be partially separated from the passenger area (complete separation in the rear side which continue with the right side towards windscreen in order to provide protection for driver against the cold air that enter in the bus at front door opening, during the winter season).</p> <ul style="list-style-type: none"> <li>• the wall of the driver's cab is closed, designed from the floor up to the ceiling;</li> <li>• equipped with a door for the entry of the driver from saloon;</li> <li>• The door of the driver's cabin must have 2 parts, the lower part and the upper part, which can be opened separately and it must be designed for offering the possibility of selling transport</li> </ul>		

		<p>tickets by the driver (by opening and securing the upper part of the door); for this purpose the door design will include installation of a specific removable shelf for ticket selling);</p> <ul style="list-style-type: none"> <li>• equipped with light above, with the possibility to adjust the intensity;</li> <li>• adequately heated/ cooled;</li> <li>• equipped in order to accommodate 2 first aid kits, a hammer for glass breaking, 2 warning triangles, fire extinguisher of at least 6 Kg and cabinet with key for personal items.</li> </ul> <p>Colour of the driver's cab – it is jointly decided with the Purchaser.</p>		
	<p><b>11.3 Dashboard</b></p>	<p>The driver's dashboard must include the On board computer and a multifunctional digital screen including OBD function.</p> <p>The on board self-diagnosis function – OBD will be provided through the electronic management system of the vehicle. The On board computer will display on screen the faults which occurs during the vehicle operation for all the monitored systems. The faults which affect the traffic safety will be mandatory displayed on the dashboard screen. The faults will be displayed as text message, in Romanian language, or pictograms and not as error codes.</p>		

		The Supplier will provide the faults/errors catalogue. The warnings on board the vehicle will be distinctive and suggestive for critical faults (the bus is not allowed to move) and separately for ordinary faults (the bus can be driven).		
	<b>11.4 Sun protection</b>	<p>The driver's cab will be provided with fixed (foil) sunshades and mobile sunshades type roller positioned in the following manner :</p> <ul style="list-style-type: none"> <li>• foil soldered on the upper side of the windscreen and of the sections of the lateral window;</li> <li>• 2 adjustable sunshades type roller on the windscreen which would cover its entire surface, but which can be separately commanded;</li> <li>• one adjustable sunshade type roller which would cover the entire section of the left lateral window, including the mobile window.</li> </ul>		
<b>12. OTHER EQUIPMENT ON THE VEHICLE</b>		<ul style="list-style-type: none"> <li>• 2 first aid kit's, according to the laws from the EU and Romania concerning the safety in traffic, assembled in the driver's cab;</li> <li>• hammers for breaking the windows in cases of emergency, located in the driver's cab and in the passenger compartment, close to the emergency exit windows;</li> </ul>		

		<ul style="list-style-type: none"> <li>• two warning triangles.</li> <li>• two wedges (gauges) for wheels fastened and secured;</li> <li>• two fire extinguishers, at least 6 kg (one in the driver's cab and one in the front side of the vehicle);</li> <li>• reflecting vest;</li> <li>• breakdown flashlight with intermittent light signal;</li> <li>• spare wheel of the same type as the one from the vehicle;</li> <li>• 2 hydraulic jacks;</li> <li>• 3 sets of keys for each type (engine start, safety, special keys, etc.)</li> <li>• all the inscriptions and labels within the driver's cab and passenger compartment will be in Romanian and English, according to the purchaser's specifications.</li> </ul>		
<b>13. FUELING SYSTEM</b>	<b>13.1 Fuel tank</b>	Capacity minimum 250L. Manufactured from synthetic plastic material or stainless steel. With fuel level indicator which will send information to CAN system.		
	<b>13.2 AdBlue tank</b>	Volume minimum 30L		
	<b>13.3 Oil tank for power-assisted steering</b>	The oil tank for power-assisted steering has to be positioned in an accessible place with possibility of facile verification from the exterior of		

		the liquid level.		
	<b>13.4 Windscreen washing system</b>	With tank with a capacity of at least 4 liters		
<b>14.BUS DRIVABILITY</b>		Stability on slope: minimum 12% at maximum load		
		<p>Performances at turning: according to R36 EEC-UNO (the drivability will be supported through the documentation from the tender). The bus has to register in any lock sense within a circle with the radius of 12.5m, and none of its extreme points would exceed the circle perimeter.</p> <p>Access angle: min. 7 degrees.</p> <p>Departure Angle: min. 7 degrees.</p> <p>Speed limitation: 70 km/h.</p>		
<b>15. SISTEME INTELIGENTE DE TRANSPORT</b>	<b>15.1. Existing equipment and the necessary preparations for existing equipment relocation on new buses</b>	The Supplier is responsible with wiring and fitting preparation for installation of the above mentioned equipment, as these installations should be conducted in an easy manner for the Purchaser (plug & play). The Supplier will design the final scheme for ITS equipment installation with the Supplier approval.		
	<b>15.2. Dual validator for Mifare contactless cards and paper</b>	Reading/writing module for ISO 14443 A, B contactless cards Paper ticket thermal printer. The ticket slot must be 30 mm wide; the		

	<p><b>printed tickets</b></p>	<p>paper ticket is 28 mm wide (paper thickness: 80..100 g/sqm). The information written on the paper ticket will include: date &amp; time, route and vehicle id.</p> <p>Memory:</p> <ul style="list-style-type: none"> <li>○SDRAM – minimum 128 MB DDR2 SDRAM</li> <li>○FLASH – minimum 256 MB NAND FLASH</li> <li>○EEPROM: 1 x 32 Kbit</li> </ul> <p>LCD colour touchscreen</p> <ul style="list-style-type: none"> <li>○ Screen size: minimum 7"</li> <li>○ Touch function available for the complete surface of the screen – must allowed configuration of buttons in any point of the screen</li> <li>○ Impact-resistant (anti-vandalism)</li> </ul> <p>Integrated contactless card reader: ISO 14443A, anti-collision protection Compatible with Mifare 1K, Mifare 4K, Mifare Ultralight cards and EMV/Mifare dual cards</p> <p>Validators must be able to manage EMV contactless cards transactions without any further modifications on hardware, after implementation of necessary protocols between RATBV and banking institutions</p> <p>Validators must be installed through a mounting socket on bars with diameter of 30 – 40 mm. The mounting socket must store data on EPROM, related to installation location (IP address, route, vehicle number etc.) in order to simplify the</p>		
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		validators replacing procedure		
	<b>15.3. On board ITS computer</b>	<ul style="list-style-type: none"> <li>- Data management: routes, bus stops, vehicle information (vehicle id, device serial number, firmware version)</li> <li>- Obtain and display the location data (latitude, longitude, vehicle speed)</li> <li>- Determine and display the current bus stop (GPS location + door opening sensors)</li> <li>- Exterior LED display management module (front, side, rear panel): control and monitoring of exterior LED displays, receiving the configuration files from back-office application and send them to the LED panels</li> <li>- Audio announcement module (external speaker): control and play the audio announcements, send audio output to sound amplifier and external speaker, receive and store the audio files sent from back-office application</li> <li>- Video surveillance module: it allow remote access, on request, to live video images and video records download</li> <li>- Passenger counting module: it collects, processes, transfers and displays (on screen, on request) the data received from counting sensors; it concatenate the counting data with the information about route, bus stop and vehicle id and it send it through the mobile communication module to the data server</li> </ul>		

		<p>- Voice communication module (Voice over IP - VoIP) provides voice communication between driver and dispatch centres; opening and responding to calls will be conducted through the touchscreen display (CB-ITS will also include headphone and microphone for driver)</p> <p>- CAN interface module: it collects, processes and communicates to back-office the vehicle parameters and the warnings/alarms received from the CAN interface (including fuel consumption); it displays on screen the warnings/alarms sent through CAN interface and also the values of some important parameters</p> <p>Connectivity – OBC-ITS must allow data sending and receiving to/from back-office applications through mobile communication 3G/4G, WI-FI (at Depots) or WLAN, USB, Ethernet interfaces. The regular operation will use mobile communication 3G/4G</p>		
	<p><b>15.4. Passenger information system (exterior)</b></p>	<ul style="list-style-type: none"> <li>•Front panel, minimum resolution of 17 x 160 pixels, minimum pitch of 10x10 mm, minimal dimensions (length, width, thick) of 1700x225x35 mm</li> <li>•Right side panel, minimum resolution of 17 x 128 pixels, minimum pitch of 10x10 mm, minimal dimensions (length, width, thick) of 1300x2305x35 mm</li> <li>•Rear panel, minimum resolution of 17 x 32 pixels, minimum pitch of 10x10 mm, minimal dimensions (length, width, thick) of 360x225x35 mm</li> </ul>		

		<p>15.4.3. Exterior audio information system</p> <p>Each bus must be equipped with an external speaker which will be installed above the front door, for visual impairment passenger information about route number and destination of the vehicle.</p>		
	<b>15.5 Monitoring system (Video surveillance)</b>	<p>According to the specifications from Technical Requirements</p>		
	<b>15.6 Automatic Passenger Counting (APC) system</b>	<p>The system will be infrared or video technology with 3D function and minimum 98% accuracy without software processing and correction.</p> <p>Maintenance free for the lifetime of 8 years</p> <p>Provided with software for PC user-friendly with Romanian interface capable to generate standard and customized reports and analysis.</p>		
	<b>15.7. Voice communication system between the bus and dispatch centre</b>	<p>When a driver wants to communicate with dispatch, the vehicle will send a request to the dispatches through pressing a button. Communication channel opening must be performed by each of the dispatch centres. Communication will be heard in all dispatch centres.</p>		
	<b>15.8. The integrated system for electronic management and diagnosis (ISEMD) through CAN</b>	<p>Real time visualization of main alerts/warnings and errors from vehicle subsystems according with technical requirements</p> <p>Real time visualization of vehicle speed, engine rotations, cooling liquid temperature, engine oil</p>		

		<p>pressure, instant fuel consumption, fuel level in fuel tank, AdBlue level, temperature in passenger area</p> <p>Driving mode report</p> <p>Top best driver during a selected period</p> <p>Top worst driver during a selected period</p> <p>Fuel consumption report</p> <p>Distances covered by the bus between each end of line and between depot and the end of line</p> <p>Engine working hours of vehicle</p> <p>Idle time of the bus</p> <p>Number of wheelchair ramp utilization</p> <p>Doors operating report</p> <p>Speed Gear utilization report</p> <p>The application will allow editing of others reports based on data structure saved on server</p> <p>interface for remote monitoring and control of the air conditioning and heating system from the passenger compartment</p>		
	<p><b>15.9. Back-office software and hardware for ITS</b></p>	<p><b>15.9.1. Hardware solution</b> - according with Technical Requirements</p> <p><b>15.9.2. Software solution :</b></p> <p>a) Operating systems;</p> <p>b) Database server;</p> <p>c) Software for data back-up;</p> <p>d) Software application (accessible from web browser) for OBC-ITS configuration</p>		

		<p>e) Software application for exterior passengers information LED displays</p> <p>f) Software application for passenger audio information (exterior speaker)</p> <p>g) Back-office software application (accessible from web browser) for passenger counting system: interface for database access, reports and dashboard (view of specific information for management staff)</p> <p>h) Back-office software application (accessible from web browser) for the integrated system for electronic management and diagnosis (ISEMD) through CAN: interface for database access, reports, alerts/warnings display interface and dashboard (view of specific information for management staff)</p> <p>i) Software application (accessible from web browser) for voice communication system operation</p>		
<b>16. FIRE PROTECTION</b>		<p>All the materials installed in the vehicle have to comply with EEC-UNO 118 or 95/28/ECE.</p> <p>Automatic alarm devices in case of fire, extreme temperatures and smoke in the engine compartment.</p> <p>The automatic fire extinction system has to be installed in the vehicle in the engine area and in the compartment for additional heaters</p>		

		(pre-heaters).		
<b>17. ELECTRICAL EQUIPMENT</b>	<b>17.1 Electrical system</b>	<p>The electrical system has to be 24V.</p> <ul style="list-style-type: none"> <li>- The electrical system has to be designed in a manner in which it will provide the energy surplus when all the consumables are in maximum load and the engine is in the idle speed.</li> <li>- The communication network in the bus is executed with CAN network.</li> <li>- All the electronic units from the vehicle have to be connected in view of communicating through this type of connection.</li> </ul> <p>12 V batteries and capacity between 180 -235 Ah, laterally assembled on a sliding carriage and adequately protected against corrosion.</p>		
	<b>17.2 Speedometer</b>	<p>Approved according to the regulations EEC-UNO, No. 39 or 76/443/EC. It has to be installed or it has to be a component part of the dashboard.</p> <p>The speedometer needs to have LCD display and to display at least the following data:</p> <ul style="list-style-type: none"> <li>- Date</li> <li>- Time</li> <li>- Kilometres</li> </ul>		

		- Diagnosis information		
	<b>17.3 Wiring</b>	All the cables have to be marked with numbers.  All the fuses installed have to be automatic		
<b>18. Mandatory spare parts, components and related equipment</b>	<b>18.1 Tools, devices and test equipment, specific equipment and software</b>	The supplier shall deliver and install all the equipment specified in the Supply Requirements – Annex 1.1		
	<b>18.2 Mandatory spare parts and materials</b>	The supplier shall deliver all the spare parts specified in the Supply Requirements – Annex 1.2		
	<b>18.3. Mandatory components and electronic control units</b>	The supplier shall deliver all the components specified in the Supply Requirements – Annex 1.3		
<b>19. SERVICES</b>	<b>19.1 Service unit</b>	Setting up the service centre/workshop as per the Supply Requirements		
	<b>19.2 Staff training</b>	Training the purchaser staff as per the Supply Requirements		
	<b>19.3. Maintenance services</b>	19.3.1. Daily maintenance activity according with Supply Requirements  19.3.2. Planned maintenance activity according with Supply Requirements		
<b>20. TECHNICAL DOCUMENTATION</b>	<b>20.1 Documentation for</b>	Provide documents as per the		

<b>PROVIDED BY THE SUPPLIER</b>	<b>each bus</b>	Supply Requirements		
	<b>20.2 Maintenance documentation for all the buses</b>	Provide documents as per the Supply Requirements		
<b>21.MAINTENANCE THROUGHOUT THE WARRANTY PERIOD</b>		Provide documents as per the Supply Requirements		
<b>22. FAULT REPAIRS DURING THE WARRANTY PERIOD</b>		<p>A detailed description of the execution manner of the technical support and service activity throughout the warranty period according to the Purchaser's requirements as per Supply Requirements</p> <p>A statement of the warranty terms provided according to the Purchaser's requirements and fill-in the form Warranty terms as per Supply Requirements.</p>		
<b>23. AVAILABILITY</b>		Provision of a statement to demonstrate the compliance with the requirements in the Supply Requirements		
<b>24. DELIVERY OF SPARE PARTS AFTER THE EXPIRY OF THE</b>		The statement to guarantees the availability of the components and spare parts necessary for the operation of the buses for the		

<b>WARRANTY PERIOD</b>		minimum period of 12 years from the delivery of the last bus.		
<b>25. TEST AND INSPECTION OF GOODS</b>	<b>25.1 Inspection</b>	Allow inspections as per the Supply Requirements		
	<b>25.2. Verification of characteristics, quality of parts and materials</b>	According to the Purchaser's requirements from the documentation.		
	<b>25.3. Verification before delivery</b>	All the necessary tests and the operational tests which the purchaser requested before the delivery will be conducted in the manufacturer's plant. The operation of all aggregates, installations and devices installed on the bus is tested at delivery and the existence of all the additional endowments, inscriptions and markings required is verified.		
	<b>25.4 Test after delivery</b>	Provision of a statement to demonstrate the compliance with the requirements in the Supply Requirements		
<b>26.SYSTEMATIC FAULTS AND HIDDEN FAULTS</b>		A bidding declaration to state the compliance with the requirements in the Supply Requirements.		
<b>27. MARKING, PRESERVATION, PACKAGING, TRANSPORTATION</b>	<b>27.1 Marking</b>	According to the Purchaser's requirements as per Supply Requirements		
	<b>27.2 Preservation, packaging, transportation</b>	According to the Purchaser's requirements as per Supply Requirements		



**ANNEX II**  
**DECLARATION OF FUEL CONSUMPTION**

DECLARATION OF FUEL CONSUMPTION
<b>Tender number:</b> _____
<p>We the undersigned..... hereby declare that the city buses type/make..... with lowered floor have a consumption of .....litres at 100 Km covered .</p> <p>The determination of the declared fuel consumption is performed according to the following methodology:</p> <ul style="list-style-type: none"><li>• The bus used to conduct the fuel consumption measurements has the same characteristics as the delivered buses</li><li>• The testing vehicle has the same aggregates (the same type, manufacturer) and all the devices as the delivered buses</li><li>• The testing procedure for the fuel consumption is performed according with UITP (The International Association of Public Transport) methodology "SORT 1" (Standardized cycles On-Road Tests). The fuel consumption tests are conducted according to the SORT 1 cycle.</li></ul> <p>Please find in attachment the test results, as well as the testing procedure (according to SORT 1 testing method), namely the report on the fuel consumption according to the test required.</p> <p>With reference to the above mentioned information, we consent that according to the tender submitted to the purchaser, if our tender is declared successful, the SORT 1 test will be conducted, at our costs, on one vehicle after traveling around 20.000 km, vehicle(s) selected by the purchaser from the delivered buses. If the result is negative, namely the consumption is higher than the one declared in the tender is registered, but with the acceptable limits set in the Technical Specifications, the liquidated damages foreseen in the Clause 20.1 Particular Conditions of Contract will apply for all the vehicles delivered.</p> <p>We understand that if the SORT 1 test will exceed the acceptable limits set in the Technical Specifications, the Purchaser has the right to consider our goods as not conform with the Technical Specifications.</p> <p>Name _____ Representative of: _____</p> <p>Signature _____</p> <p>Duly authorized to sign the tender for and on the behalf of:.....</p> <p>Date: _____ month _____ year _____</p>

**Note:** [The tenderer fills this form for each of the bus types according to the instructions. It is not allowed to change the form and the replacement is not accepted. Modifications can be operated based on the joint agreement with the partners and signed by the authorized individual for each individual partner along with the necessary evidences.]

**ANNEX III**  
**THE OPERATIONAL LIFETIME ENERGY AND ENVIRONMENTAL IMPACTS COST**

In pursuance of Directive 2009/33/EC / 23.04.2009 on the promotion of clean and energy efficient vehicles, the tenderers shall provide as an integral part of the technical proposal the calculated energy and emission costs (CO<sub>2</sub>; NO<sub>x</sub>; PM and NMHC) in EUR. **For the purposes of tender evaluation, all prices will be converted to RON at the exchange rate generated by ECEPP.**

Therefore the tenderers shall therefore fill in the table below with the requested information:

№	Index for 1 km covered	Price of energy or emissions	Lifetime of the bus (in Km)	Midi-buses (10 m)		Standard buses (12 m)		Articulated buses (18 m)		Lifetime energy and emission costs for <b>all buses</b> ( in €)
				Specific consumption and emission of the bus offered by the tenderer	Number of buses	Specific consumption and emission of the bus offered by the tenderer	Number of buses	Specific consumption and emission of the bus offered by the tenderer	Number of buses	
0.	1.	2.	3	4.	5.	6.	7.	8.	9.	10.
1.	Diesel fuel consumption (l/km) (under the test conditions of SORT1)	1.0 € /l	800,000	_____ l/km	30	_____ l/km	40	_____ l/km	35	A= _____
2.	Quantity of emissions of carbon dioxide (CO <sub>2</sub> ) (kg/km)	0.035 €/kg	800,000	_____ kg/km	30	_____ kg/km	40	_____ kg/km	35	B= _____
3.	Quantity of emissions of nitrogen oxides (NO <sub>x</sub> ) (g / km)	0.0044 €/g	800,000	_____ g/km	30	_____ g/km	40	_____ g/km	35	C= _____
4.	Quantity of non-methane hydrocarbons (g/km)	0.001 €/g	800,000	_____ g/km	30	_____ g/km	40	_____ g/km	35	D= _____
5.	Quantity of particles (PM) (g/km)	0.087 €/g	800,000	_____ g/km	30	_____ g/km	40	_____ g/km	35	E= _____
Total EVC									A+B+C+D+E	

**The Environment Cost (EvC) is calculated as follows:**

$$\text{EvC} = \text{A} + \text{B} + \text{C} + \text{D} + \text{E}$$

**Where**

**A is the** lifetime energy cost for the fleet of buses purchased, calculated as follows:

$$\text{A} = [\text{Pf} \times \text{Lt} \times \text{X}(\text{Fc}_1 \times \text{N}_1)] + [\text{Pf} \times \text{Lt} \times \text{X}(\text{Fc}_2 \times \text{N}_2)] + [\text{Pf} \times \text{Lt} \times \text{X}(\text{Fc}_3 \times \text{N}_3)]$$

**Pf is Price of fuel = 1.0 € / l**

**Lt is the** lifetime run of the vehicle which is 800,000(km) as defined in the Directive 2009/33/EC / 23.04.2009, transposed in the Romanian legislation;

**Fc<sub>1</sub>** is the fuel consumption (l/km) of the Midi-buses (10 m) offered by the tenderer

**N<sub>1</sub>** is the number of Midi-buses (10 m) requested in the tender=30

**Fc<sub>2</sub>** is the fuel consumption (l/km) of the Standard buses (12 m) offered by the tenderer

**N<sub>2</sub>** is the number of Standard buses (12 m) requested in the tender=40

**Fc<sub>3</sub>** is the fuel consumption (l/km) of the Articulated buses (18 m) offered by the tenderer

**N<sub>3</sub>** is the number of Articulated buses (18 m) requested in the tender=35

**B is the** lifetime cost of emission of carbon dioxide (CO<sub>2</sub>) for the fleet of buses purchased, calculated as follows:

$$\text{B} = [\text{Pc} \times \text{Lt} \times \text{X}(\text{Cc}_1 \times \text{N}_1)] + [\text{Pc} \times \text{Lt} \times \text{X}(\text{Cc}_2 \times \text{N}_2)] + [\text{Pc} \times \text{Lt} \times \text{X}(\text{Cc}_3 \times \text{N}_3)]$$

**Pc** is the cost of CO<sub>2</sub>= 0.035 / kg

**Lt** is the lifetime run of the vehicle which is 800,000(km) as defined in the Directive 2009/33/EC / 23.04.2009, transposed in the Romanian legislation;

**Cc<sub>1</sub>** is the quantity of emission of CO<sub>2</sub> (kg/km) of the Midi-buses (10 m) offered by the tenderer

**N<sub>1</sub>** is the number of Midi-buses (10 m) requested in the tender=30

**Cc<sub>2</sub>** is the quantity of emission of CO<sub>2</sub> (kg/km) of the Standard buses (12 m) offered by the tenderer

**N<sub>2</sub>** is the number of Standard buses (12 m) requested in the tender=40

**Cc<sub>3</sub>** is the quantity of emission of CO<sub>2</sub> (kg/km) of the Articulated buses (18 m) offered by the tenderer

**N<sub>3</sub>** is the number of Articulated buses (18 m) requested in the tender=35

**C is the** lifetime cost of emissions of nitrogen oxides (NO<sub>x</sub>) for the fleet of buses purchased, calculated as follows:

$$\text{C} = [\text{Pn} \times \text{Lt} \times \text{X}(\text{Cnox}_1 \times \text{N}_1)] + [\text{Pn} \times \text{Lt} \times \text{X}(\text{Cnox}_2 \times \text{N}_2)] + [\text{Pn} \times \text{Lt} \times \text{X}(\text{Cnox}_3 \times \text{N}_3)]$$

**Pn** is the cost of NO<sub>x</sub> = 0.0044 €/g

**Lt** is the lifetime run of the vehicle which is 800,000(km) as defined in the Directive 2009/33/EC / 23.04.2009, transposed in the Romanian legislation;

**Cnox<sub>1</sub>** is the quantity of emission of NOx (g/km) of the Midi-buses (10 m) offered by the tenderer

**N<sub>1</sub>** is the number of Midi-buses (10 m) requested in the tender=30

**Cnox<sub>2</sub>** is the quantity of emission of NOx (g/km) of the Standard buses (12 m) offered by the tenderer

**N<sub>2</sub>** is the number of Standard buses (12 m) requested in the tender=40

**Cnox<sub>3</sub>** is the quantity of emission of NOx (g/km) of the Articulated buses (18 m) offered by the tenderer

**N<sub>3</sub>** is the number of Articulated buses (18 m) requested in the tender=35

**D is the** lifetime cost of emissions of non-methane hydrocarbons for the fleet of buses purchased, calculated as follows:

$$D = [Pm \times Lt \times X(Cmh_1 \times N_1)] + [Pm \times Lt \times X(Cmh_2 \times N_2)] + [Pm \times Lt \times X(Cmh_3 \times N_3)]$$

**Pm** is the cost of non-methane hydrocarbons = 0.001 €/g

**Lt** is the lifetime run of the vehicle which is 800,000(km) as defined in the Directive 2009/33/EC / 23.04.2009, transposed in the Romanian legislation;

**Cmh<sub>1</sub>** is the quantity of emission of non-methane hydrocarbons (g/km) of the Midi-buses (10 m) offered by the tenderer

**N<sub>1</sub>** is the number of Midi-buses (10 m) requested in the tender=30

**Cmh<sub>2</sub>** is the quantity of emission of non-methane hydrocarbons (g/km) of the Standard buses (12 m) offered by the tenderer

**N<sub>2</sub>** is the number of Standard buses (12 m) requested in the tender=40

**Cmh<sub>3</sub>** is the quantity of emission of non-methane hydrocarbons (g/km) of the Articulated buses (18 m) offered by the tenderer

**N<sub>3</sub>** is the number of Articulated buses (18 m) requested in the tender=35

**E is the** lifetime cost of emissions of particle (PM) for the fleet of buses purchased, calculated as follows:

$$E = [Pp \times Lt \times X(Cpm_1 \times N_1)] + [Pp \times Lt \times X(Cpm_2 \times N_2)] + [Pp \times Lt \times X(Cpm_3 \times N_3)]$$

**Pp** is the cost of particles = 0.087 €/g

**Lt** is the lifetime run of the vehicle which is 800,000(km) as defined in the Directive 2009/33/EC / 23.04.2009, transposed in the Romanian legislation;

**Cpm<sub>1</sub>** is the quantity of emission of particles (g/km) of the Midi-buses (10 m) offered by the tenderer

**N<sub>1</sub>** is the number of Midi-buses (10 m) requested in the tender=30

**Cpm<sub>2</sub>** is the quantity of emission of particles (g/km) of the Standard buses (12 m) offered by the tenderer

**N<sub>2</sub>** is the number of Standard buses (12 m) requested in the tender=40

**Cpm<sub>3</sub>** is the quantity of emission of particles (g/km) of the Articulated buses (18 m) offered by the tenderer

**N<sub>3</sub>** is the number of Articulated buses (18 m) requested in the tender=35

**Note:**

*The above specific values for fuel consumption and emission of pollutants shall be determined by SORT 1 test method.*

*To prove the performance levels provided in the table, the tenderers shall submit, as integral part of its tender, copies of certificates or records of results of tests carried out according to SORT 1 test, on products similar technical characteristics with the ones offer in the tender. By products with similar technical characteristics shall be understood buses of the same type/ model, with same engine, transmission and Tyre size.*

*The certificates and/or records proving the indicated performance levels shall be issued by a reputable certification body from an EU member states.*

*In addition to the certificates or the test records, the tenderer shall submit official documents of the manufacturer, describing the technical details and methods of calculation of fuel consumption and pollutants emissions for products similar technical characteristics with the ones offer in the tender.*

**Annexes: Methods for measurement, calculations, copies of certificates, records of tests conducted, official documents from the manufacturer or other documents in proof of the data in the table.**

Date: .....

Signature and seal: .....

*(Name and position*

## **ANNEX IV**

### **WORK PROGRAMME FOR DESIGN, MANUFACTURING AND DELIVERY**

Tenderers shall provide information on their capability and organization to carry out the manufacturing, testing and all other related activities and obligations prescribed in these Tender documents. The information shall comprise the following minimum information:

- A Programme for the design, manufacturing and delivery of Goods and Services with descriptions of major activities including testing, showing the order of activities in which the tenderer proposes to carry out the Works. The activities shall include inspection by the Purchaser, tests, commissioning, tests on completion and after completion.
- The planned input of Joint Venture Partners and Subcontractors shall be highlighted as in terms of activities undertaken, timing, etc.
- The plan dates for delivery of each batch of Goods, expressed in weeks from Commencement date, the date of signing the Contract.

## ANNEX V

### WORK PROGRAMME FOR PLANNED MAINTENANCE

Name of tenderer \_\_\_\_\_

Page ... of ...

Tenderers shall provide information on the organization to carry out planned maintenance, repair and spare parts stocking obligations described in the Tender Documents, particularly in Part 2 – Supply Requirements. In the tenderer’s proposals, all components and systems required for maintenance shall be described in detail. Any components necessary for the safe and reliable maintenance of the Goods not mentioned in the Technical Specification shall be included.

a) Attach a Method Statement describing the general approach and methodology for implementation of the works including detailed description of working methods for major items. The Method Statement shall describe the locations of maintenance, incl. team capacities and the facilities available, intended for carrying out maintenance and repair of the various components of the Goods. The Method Statement shall include a table detailing the activities to be performed with the following layout:

Activity	Workshop	Special facilities	Key Staff Deployed for Activity

b) Attach a Programme for planned maintenance, repair and spare parts stocking of Goods and Services with descriptions of major activities including inspection, preventive maintenance, overhaul, testing, etc. showing the order of activities in which the tenderer proposes to carry out the Works.

The planned input of Joint Venture Partners and Subcontractors shall be highlighted as in terms of activities undertaken, timing, etc.

According to Part 2, Supply Requirements, Chapter 19, the planned preventive and inspective maintenance (PM) of the vehicles shall be undertaken at the depot facilities. The indicated PM categories are examples only and shall be replaced by the PM categories the Tenderer foresees.

PM category of (period of maintenance activity)	PM description (what is done)	PM time (Hours) needed	Number of persons required	Special tools required	Special workshop facilities required
daily					
monthly					
quarterly					
half-yearly					
yearly					
all 2 years					
all 4 years					
all 8 years					
all 12 years					

Signature of tenderer \_\_\_\_\_





## **ANNEX VIII**

### **SAMPLE PARENT COMPANY GARANTEE**

*[Letterhead of the Tenderer's Parent Company]*

#### **PARENT COMPANY GARANTEE**

*If the Tenderer for the purposes of prequalification wants to use the references of his parent company, he shall support his application with the parent company's unconditional guarantee of due performance of all the contractor's/supplier's obligations and liabilities under the Contract.*

Date: *[insert the date]*

To: *[name and address of the Client]*

Sirs,

Re: *[specify the Contract]*

We have been informed that *[insert the Tenderer's name]* (hereinafter called the "Tenderer") is submitting a tenderer for the above Contract in response to your Invitation for Tenders dated *[insert the date of the issuance of the Invitation for Tenders]* for the contract *[insert the name of the contract]*, and that the conditions of your invitation allows his application to be supported by a parent company guarantee in order to prove its compliance with the qualification criteria.

In consideration of you, the Client, qualifying the Tenderer for the Contract, and in case the Contract is awarded to the Tenderer, we *[name of the Parent Company]* irrevocably and unconditionally guarantee to you, as a primary obligation, the due performance of all the Tenderer's obligations and liabilities under the Contract, including the Tenderer's compliance with all its terms and conditions according to their true intent and meaning.

If the Tenderer fails to so perform his obligations and liabilities and comply with the Contract, we will indemnify the Client against and from all damages, losses and expenses (including

legal fees and expenses) which arise from any such failure for which the Tenderer is liable to the Client under the Contract.

This guarantee shall come into full force and effect when the Contract comes into full force and effect. If the Contract does not come into full force and effect within a year of the date of this guarantee, or if you demonstrate that you do not intend to enter into the Contract with the Tenderer, this guarantee shall be void and ineffective.

We confirm that in the event that the contract is awarded to the this guarantee shall continue to be in full force and effect until all the Tenderer's obligations and liabilities under the Contract have been discharged, when this guarantee shall expire and shall be returned to us, and our liability hereunder shall be discharged absolutely.

This guarantee shall apply and be supplemental to the Contract as amended or varied by the Client and the Tenderer from time to time. We hereby authorise them to agree any such amendment or variation, the due performance of which and compliance with which by the Tenderer are likewise guaranteed hereunder. Our obligations and liabilities under this guarantee shall not be discharged by any allowance of time or other indulgence whatsoever by the Client to the Tenderer, or by any variation or suspension of the activities to be executed under the Contract, or by any amendments to the Contract or to the constitution of the Tenderer or the Client, or by any other matters, whether with or without our knowledge or consent.

This guarantee shall be governed by the law of the same country (or other jurisdiction) as that which governs the Contract and any dispute under this guarantee shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with such Rules. We confirm that the benefit of this guarantee may be assigned subject only to the provisions for assignment of the Contract.

Signed \_\_\_\_\_

Name \_\_\_\_\_

For and on behalf of

*[name of the Tenderer's Parent Company]*

## ANNEX IX

### TENDER CHECKLIST

**This is the indicative list of minimum documents that shall form part of the tender submitted by Tenderers**

<b>Documents</b>		
Letter of Tender and Attachment 1 – Covenant of Integrity (in accordance with the format provided in ECEPP) duly completed in the manner and detail indicated therein and signed by the tenderer;		
Completed Schedules as provided in the Tender Forms (in accordance with the format provided in ECEPP) duly completed by the tenderer in the manner and detail indicated therein and following the requirements of ITT 14 and 15;		
Tender Security, in accordance with ITT 19;		
at the Tenderer’s option, alternative proposals, if permissible, in accordance with ITT 13;		
written confirmation authorising the signatory of the Tender to commit the Tenderer, in accordance with ITT 20.2;		
Documentary evidence establishing the eligibility of the Goods and Services offered by the tenderer, in accordance with ITT 17.1;		
Documentary evidence establishing the Tenderer’s qualifications in accordance with the requirements of the Evaluation and Qualification Criteria, using the relevant forms furnished in the Tender Forms;		
Documentary evidence as specified in the TDS, establishing the conformity of the Goods and Services offered by the Tenderer with the Tender Document, using the relevant forms furnished in the Tender Forms;		
In the case of a tender submitted by a JVCA, JVCA agreement, indicating at least the parts of the Supply Requirements to be executed by the respective partners		
A detailed description of the essential technical and performance characteristics of the Goods;		
A list giving full particulars, including available sources and current prices, of spare parts, special tools, etc., necessary for the proper and continuing functioning of the Goods for a period of 12 years, following commencement of the use of the Goods by the Purchaser;		
A paragraph-by-paragraph commentary on the Purchaser’s Supply Requirements demonstrating substantial responsiveness of the Goods and Services to those specifications or a statement of deviations and exceptions to the provisions of the Supply Requirements (see Annex I -Technical Compliance Checklist Form in Section IV Tender Forms		
ISO 9001 Certificate for the Manufacturer of the buses, valid at the date of tender opening		
ISO14001 certificate for the manufacturer of the buses, valid at the date of tender opening		
Complete documentation for the bus planned maintenance (see Annex V – Work programme for planned maintenance in Section IV Tender Forms)		
Drawings of the bus (front, rear, lateral and top views), indicating the main levels and the ground clearance.		
Drawings with the interior arrangement (positioning of seats, doors, button for stop requesting, windows, security exits and positioning of the facilitation device of mounting for disabled individuals).		
Overall drawing (supporting structure, exterior coating, internal coating, assembly technology for accidental repairing);		

Diagrams of the electrical power installation;		
Diagrams of the electrical distribution panels;		
Diagrams of wirings and connectors;		
Diagram of the pneumatic installation;		
Diagram of the measurement and diagnosis points of the pneumatic installation.		
Diagram of the engine cooling installation and saloon heating.		
Diagram of the air conditioning installation.		
Diagram of the measuring and diagnosis points of the air conditioning installation.		
Diagram of the power supply installation.		
Diagram of the measuring and diagnosis points of the power supply installation.		
Diagram of the greasing installation and greasing points.		
Detailed technical specifications of the passenger counting system including details about reporting function		
List of quantities, types and specifications of the products used to lubricate all the installations and equipment, the authorized manufacturers, the periodicity of the greasing operations, the necessary filters, etc.		
Detailed technical specifications of the passenger information system		
Diagram of the special installation for the reduction of polluting gases.		
Nomenclature of all the landmarks composing the bus, which will include: name, manufacturer's code, pcs. No./ bus, supplier's code, make of origin.		
The declarations of fuel consumption (Annex II, Other tender forms).		
The EC certificates concerning the toxicity degree and the environmental protection of the materials used according to the technology of the engine type, calculated according to the model recommended by UITP&ACEA.		
The operational lifetime energy and environmental impacts cost declaration (Annex III- The operational lifetime energy and environmental impacts cost, in Other Tender Forms).		
The SORT1 test certificate with complete results of the tests, for a vehicle having relevant equivalent characteristics in terms of type, model, capacity and technical feature with the one offered in the tender. To be considered valid the certificates shall be issued by an entity that is authorized to perform these tests within the European Union.		
Certified true copies of the approval documentation of the bus, which would indicate that the tendered motor vehicle is approved with type approval certification issued by the Romanian Automotive Register (R.A.R.) or if the tendered motor vehicle does not hold type approval certificates issued by the Romanian Register of Road Vehicles, the tenderer has to present on the submission of the tenders, the proof of the fact that the tendered motor vehicle holds the European approval certificate according to the Directive EC/46/2007 amended through EC 385/2009 "Establishment the framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles". In this case, in addition to the European approval certificate according to the Directive EC/46/2007 amended through EC 385/2009, the tenderer shall submit the Certificate of Conformity („CoC“) issued by the manufacturer, for the specific model of the bus offered by the tender.		
If the tenderer doesn't have the homologation it shall provide instead a sworn statement that the homologation will be sent before delivery of the first batches of buses.		
Annex I – Technical Compliance Checklist Form (see Other Tender Forms)		
Annex II – Declaration of Fuel Consumption (see Section Other Tender Forms)		
Annex III – The operational lifetime energy and environmental impacts cost (see Other Tender Forms)		
Annex IV – Work programme for design, manufacturing and delivery (see Other Tender Forms)		
Annex V – Work programme for planned maintenance (see Other Tender Forms) -		
Annex VI – List of regulations, technical standards (see Other Tender Forms)		

Annex VII – Schedule of main components and assembles (see Other Tender Forms)		
The evidence that it will be represented by an Agent in the country as requested in ITT 16.3.		
In addition, the Tenderer shall submit the evidence that it has available, or will have, a service centre authorized by the manufacturer of the vehicle offered and by Romanian Automotive Register (R.A.R) which is situated within 200 KM from Brasov (calculated on the basis of the road distance).		
A Tender submitted by a JVCA shall comply with the following requirements: (a) Unless not required in accordance with ITT 4.1 (a), be signed so as to be legally binding on all partners and (b) Include the Representative’s authorisation referred to in ITT 4.1 (b), consisting of a power of attorney signed by those legally authorised to sign on behalf of the JVCA.		