Request for Quotation (RFQ) Development of Train Driver Registry for RD

Project Title: Serbia Railway Sector Modernization Project (SRSM) Source of Funding: IBRD 9221 YF and CRS 1015 02 D Contract Ref: SER-SRSM-RFQ-NCS-25-78 Contract Name: Development of Train Driver Registry for RD Date: April 25, 2025

Dear Sirs,

1. You are invited to submit your price quotation for the following services and goods:

Item No.	Description of Services	Qty (pcs)
1.	Development of Train Driver Registry System	1
2.	Preparation and delivery of training and user operation and maintenance manuals	1
3	Administrator desktop workstation	1

The Train Driver Registry System for the Directorate for Railways of Serbia (RD) will digitize the process of issuing and renewing permits for train drivers and ensure the safe, secure, and efficient management of associated documents. This quotation includes design, development, installation, data migration, testing of the system, training of personnel and administrator desktop workstation supply.

Detailed information on description, specifications and required quantities are attached to Annex 1.

- 2. You must quote for all the items under this Invitation. Price quotations will be evaluated for all the items together and a contract awarded to the firm offering the lowest evaluated total cost of all the items. Your price quotation in the form attached may be submitted electronically at the email address
 - to: <u>dejan.jeremic@mfin.gov.rs</u>,
 - cc: <u>larisa.puzovic@mgsi.gov.rs</u>; <u>ljiljana.dzuver@mfin.gov.rs</u>

and shall consist of:

- Form of Quotation filled in and signed (in PDF format)
- Terms and Conditions of Supply **filled in and signed** (in PDF format)
- Technical Specification **filled in and signed** (in PDF and word format)
- 4. The deadline for receipt of your quotation (s) by the Employer at the email addresses indicated in Paragraph 3 is: **May 19, 2025, until 12.00 hours, noon, local time.**
- 5. Your quotation should be accompanied by the following technical documentation, evidence and catalogue(s) and other printed material or pertinent information for each item quoted:

Development of	The	Bidder	must	noccess	150	27000	certification	to	encure
the Train Driver	The Bidder must possess ISO 27000 certification to ensure compliance with information security standards.								
Registry System	compliance with mormation security standards.								

A Bidder who does not manufacture an item/s, shall provide evidence of being duly authorized by a manufacturer (Manufacturer's Authorization Form) issued by Head Quarters/Branch Offices or

submit documentation on, its status as a Bidder, to the satisfaction of the Employer (e.g. authorized dealer/ distributor of the items).

- 6. Your quotation(s) should be submitted as per the following instructions and in accordance with the attached Contract. The attached Terms and Conditions of Supply are an integral part of the Contract.
 - (i) <u>PRICES</u>: The prices should be quoted in RSD (Serbian Dinar), for the Total Cost at destination at Directorate for Railway at address Nemanjina street, No. 6 Belgrade, Serbia , which includes all taxes, customs, duties, inland transportation, and insurance, loading and unloading.
 - (ii) <u>EVALUATION OF QUOTATIONS</u>: Offers determined to be substantially responsive to the technical specifications will be evaluated by comparison of the total price at the destination as per paragraph 2 above.

In evaluating the quotations, the Employer will determine for each bid the evaluated price by adjusting the price quotation by making any corrections for any arithmetical errors as follows:

- a. where there is a discrepancy between amounts in figures and in words, the amount in words will govern;
- b. where is a discrepancy between the unit rate and the line-item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern;
- c. if a Bidder refuses to accept the correction, his quotation will be rejected.

(iii) <u>AWARD OF CONTRACT</u>: The award will be made to the Bidder offering the lowest substantially evaluated responsive quotation and that meets the required technical and financial capabilities. The successful Bidder will sign a Contract as per attached form of contract and terms and conditions of supply.

(iv) <u>VALIDITY OF THE OFFER</u>: Your quotation(s) should be valid for a period of ninety (90) days from the deadline for receipt of quotation(s) indicated in Paragraph 4 of this Request for Quotation.

7. Further information can be obtained from address below:

Dejan Jeremić CFU Procurement Specialist Ministry of Finance Central Fiduciary Unit Balkanska 53 11000 Belgrade Republic of Serbia Tel/Fax: + 381 11 765 2565 E-mail: dejan.jeremic@mfin.gov.rs

8. Inspections and Audits

- 8.1 The Bidder shall carry out all instructions of the Employer which comply with the applicable laws where the destination is located.
- 8.2 The Bidder shall permit, and shall cause its Subcontractors and consultants to permit, the World Bank (Bank) and/or persons appointed by the Bank to inspect the Bidder's offices and all accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the Bank if requested by the Bank. The Bidder's and its Subcontractors and consultants' attention is drawn to Clause 5 Fraud and Corruption of the Form of Contract, which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights constitute a prohibited practice subject to contract

termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures).

Sincerely,

Dejan Jeremić

CFU Procurement Specialist

FORM OF CONTRACT

THIS AGREEMENT number **SER-SRSM-RFQ-NCS-25-78** made on ______ 2025, between the Ministry of Construction, Transport and Infrastructure (MCTI), having its principal place of business at Nemanjina 22-26, 11000 Belgrade, Republic of Serbia (hereinafter called "the Employer") on the one part and _______ having its principal place of business at ______ (hereinafter called "the Bidder") on the other part.

WHEREAS the Employer has invited quotation for **Development of Train Driver Registry for RD** to be supplied by Bidder, viz. Contract Ref No **SER-SRSM-RFQ-NCS-25-78** (hereinafter called "Contract") and has accepted the Bid by the Bidder for the supply of services and goods under Contract at the sum of

(_____) exclusive of VAT hereinafter called "the

Contract Price".

The Contract will be effective from the date of signing and will last until the finalization of the delivery upon Employer request, as specified in Terms and Conditions of supply.

NOW THIS AGREEMENT witnesses as follows:

1. The following documents shall be deemed to form and be read and construed as part of this agreement:

a) Form of Quotation; Term and Conditions of Supply, Technical Specification;

b) Addendum (if applicable);

2. Taking into account payments to be made by the Employer to the Bidder as hereinafter mentioned, the Bidder hereby concludes an Agreement with the Employer to execute and complete the supply of Contract and remedy any defects therein in conformity with the provisions of Contract.

The services that are to be procured under this contract are for the needs of *Directorate for Railways* (*hereinafter: End Recipient*) and respective payments will be made by the Employer (the MoCTI) from the Serbia Railway Sector Modernization Project (SRSM) funds.

3. Testing

- 3.1 The Bidder shall at its own expense and at no cost to the Employer carry out all such tests and/or inspections of Goods and Related Services.
- 3.2 Whenever the Bidder is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Employer. The Bidder shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Employer and End Recipient or its designated representative to attend the test and/or inspection.
- 3.3 On site testing should be performed by administrator testing unit,
- 3.4 The Employer and End Recipient may require the Bidder to carry out any test and/or inspection not required by the Contract but deemed necessary to verify that the characteristics and performance of the services and goods comply with the technical specifications, codes and standards under the Contract, provided that the Bidder's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of manufacturing and/or the Bidder's performance of

its other obligations under the Contract, due allowance will be made in respect of the Delivery Dates and Completion Dates and the other obligations so affected.

4. The Employer hereby covenants to pay in consideration of the services supply and acceptance of Contract and remedying of defects therein, the Contract Price in accordance with Payment Conditions prescribed by Contract.

5. Termination

- 4.1 Termination for Default
 - (a) The Employer, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Bidder, may terminate the Contract in whole or in part:
 - (i) if the Bidder fails to deliver any or all of the Services and Goods within the period specified in the Contract, or within any extension thereof granted.
 - (ii) if the Bidder fails to perform any other obligation under the Contract; or
 - (iii) if the Bidder, in the judgment of the Employer has engaged in fraud and corruption, as defined in Clause 5 below, in competing for or in executing the Contract.
 - (b) In the event the Employer terminates the Contract in whole or in part, the Employer may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered or not performed and the Bidder shall be liable to the Employer for any additional costs for such similar Goods or Services. However, the Bidder shall continue performance of the Contract to the extent not terminated.
- 4.2 Termination for Insolvency.
 - (a) The Employer may at any time terminate the Contract by giving notice to the Bidder if the Bidder becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Bidder, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Employer.
- 4.3 Termination for Convenience.
 - (a) The Employer, by notice sent to the Bidder, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Employer's convenience, the extent to which performance of the Bidder under the Contract is terminated, and the date upon which such termination becomes effective.
 - (b) The Goods that are complete and ready for shipment within twenty-eight (28) days after the Bidder's receipt of notice of termination shall be accepted by the Employer at the Contract terms and prices. For the remaining Goods, the Employer may elect:
 - (i) to have any portion completed and delivered at the Contract terms and prices; and/or
 - (ii) to cancel the remainder and pay to the Bidder an agreed amount for partially completed Goods and Services and for materials and parts previously procured by the Bidder.

6. Fraud and Corruption

6.1 If the Employer determines that the Bidder and/or any of its personnel, or its agents, or its Subcontractors, consultants, service providers, Bidders and/or their employees has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices (as defined in the prevailing Bank's sanctions procedures), in competing for or in executing the Contract, then the Employer may, after giving 14 days' notice to the Bidder, terminate the Bidder's employment under the Contract and cancel the contract, and the provisions of Clause 4 shall apply as if such expulsion had been made under Sub-Clause 4.1.

7. Inspections and Audits

- 7.1 The Bidder shall carry out all instructions of the Employer which comply with the applicable laws where the destination is located.
- 7.2 The Bidder shall permit, and shall cause its Subcontractors and consultants to permit, the Bank and/or persons appointed by the Bank to inspect the Bidder's offices and all accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the Bank if requested by the Bank. The Bidder's and its Subcontractors and consultants' attention is drawn to Clause 5 Fraud and Corruption, which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures).

Signature and seal of the Employer: FOR AND BEHALF OF **Signature and seal of the Bidder:** FOR AND BEHALF OF

Name of Authorized Representative

Name of Authorized Representative

FORM OF QUOTATION

(Date *insert*)

To: Ministry of Construction, Transport and Infrastructure Nemanjina 22-26 11000 Belgrade Republic of Serbia

We offer to execute the **Development of Train Driver Registry for RD**, Ref No: **SER-SRSM-RFQ-NCS-25-78**, in accordance with the Conditions of Contract accompanying this Quotation for the Contract Price of _________ (amount in words and numbers) (_________) RSD exclusive of VAT. We propose to complete the delivery of services and goods described in the Contract within a period of _______ calendar days from the Date of Signing of the Contract.

This Quotation and your written acceptance will constitute a binding Contract between us. We understand that you are not bound to accept the lowest or any Quotation you receive.

We hereby confirm that this Quotation complies with the Validity of the Quotation required by the proposal documents.

Authorized Signature: *insert* Name and Title of Signatory *insert*

Name of Bidder: *insert* Address: *insert* Phone Number: *insert* Fax Number: *insert*

Terms and Conditions of Supply

Project Title: Serbia Railway Sector Modernization Project (SRSM) Employer: Ministry of Construction, Transport and Infrastructure Contract Ref No: SER-SRSM-RFQ-NCS-25-78

Item No.	Description of Services	Qty (pcs)	Net Unit Price (RSD) at final destination (exclusive of VAT)	Total price per line (RSD) at final destination (exclusive of VAT)	Total VAT per line (RSD)	Total Price (RSD) at final destination (includes all taxes, VAT, customs, duties, inland transportation and insurance)	Delivery Schedule from contract signature date (insert days)
1	2	3	4	5 (3x4)	6	7 (5+6)	8
1.	Development of Train Driver Registry System	1	insert	insert	insert	insert	insert
2.	Preparation and delivery of training and user operation and maintenance manuals	1	insert	insert	insert	insert	insert
3	Administrator desktop workstation	1	insert	insert	insert	insert	insert
	TOTAL AN	IOUNT	C (RSD)	insert	insert	insert	insert

1. **Prices and Schedules for Supply**

Note: In case of discrepancy between unit price and total derived from unit price, the unit price shall prevail.

- 2. **Fixed Price:** The prices indicated above are firm and fixed and not subject to any adjustment during contract performance.
- 3. **Delivery Schedule:** The Train Driver Registry System, training material, user operation and maintenance manuals and administrator desktop workstation should be delivered as per the above schedule but not exceeding 7 months from the date of the contract signature.

The Train Driver Registry system should be designed, developed, and configured according to the timeline and technical specifications provided and hosted on server of Directorate for Railways, while administrator desktop workstation shall remain at Directorate for Railways's premises. The Employer and End Recipient will provide necessary support to facilitate the workstation installation and commissioning. Upon completion of installation and commissioning, the Supplier is required to issue an **Operational Acceptance Certificate**, to be signed by the Supplier, Employer, and End Recipient

Before testing, The Bidder shall conduct training sessions for up to six (6) persons from Directorate for Railways on the operation and maintenance of the Train Driver Registry and provide set of 10 (ten) of **User operation and maintenance manuals** in Serbian. The training session will be organized in premises of Directorate for Railway in Nemanjina street No. 6, Belgrade, Serbia.

Testing and commissioning of the system will take place at the Directorate for Railways' premises at Nemanjina Street No. 6, Belgrade. The Employer and End Recipient will offer support during the testing and commissioning phase, after which the Bidder must issue a **Testing and Commissioning Report**, signed by the Bidder, Employer, and End Recipient. The Bidder is obligated to identify and rectify all deficiencies and bugs encountered during testing, ensuring that all identified issues are documented in the report. After the successful completion of commissioning, the Employer will issue the **Operation Acceptance Certificate** of the developed system.

- 4. **Applicable Law:** The Contract shall be interpreted in accordance with the laws of the Republic of Serbia.
- 5. **Resolution of Disputes:** The Employer and the Bidder shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute between them under or in connection with the Contract. In the case of a dispute between the Employer and the Bidder, the dispute shall be settled in accordance with the country procedures.
- 6. **Payment** of your invoice will be made as follows:
 - Payment for the Train Driver Registry System, preparation training and user manuals and administrator desktop workstation will be made available after its commissioning and issuing Operational Acceptance Certificate.
- 7. **Warranty:** The warranty period should be twelve months for the Train Driver Registry System and for the administrator desktop workstation it should be 36 months. The problems that would arise within the warranty period will be solved and implemented by Bidder without any cost. The Bidder shall respond to the reported failure or problem by the Directorate for Railways no later than 4 hours. Failures and problems will be reported using e-mail. The deadline for troubleshooting is 48 hours from reporting the failure or problem.
 - 8. **Training:** The Bidder shall provide training on the use of all Registry functionalities as well as database maintenance for up to six (6) users of the Register, before putting the Register into operation. The training should be accompanied by appropriate written material in the form of instructions together with a manual on how to use and maintain the database, i.e. a set of 10 (ten) User operation and maintenance manuals in Serbian shall be provided.
- 9. **Packaging and Marking Instructions:** The Bidder shall provide standard packing of the Goods as required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract.
- 10. **Defects:** All defects will be corrected by the Bidder without any cost to the Employee within 30 days from the date of notice by Employer. Name and address of service facility which the defects are to be corrected by the Bidder within the warranty period:

Address______INSERT _____

11. **Force-Majeure:** The Bidder shall not be liable for penalties or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force-Majeure.

For purposes of this clause, "Force-Majeure" means an events beyond the control of the Bidder and not involving the Bidder's fault or negligence and not foreseeable. Such events may include, but not restricted to, act of Employer in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes. If a Force-Majeure situation arises, the Bidder shall promptly notify the Employer in writing of such condition and the cause thereof. Unless otherwise directed by the Employer in writing, the Bidder shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by Force-Majeure event.

12. **Required Technical Specifications**

- (i) General Description
- (ii) Specific details and technical standards
- (iii) Performance Parameters

Bidder confirms compliance with above specifications {In case of deviations Bidder to list all such deviations}.

NAME OF BIDDER______

Authorized Signature and Stamp_____

Place: _____

Date:	

<u>Annex 1</u>

Technical Specifications

1. Hosting and workstation specification

Hosting of the Train Driver Registry will be carried out on a server of Directorate for Railways with the dedicated purpose of installing this registry, while administration, testing and help desk support, shall be conducted by administrator desktop workstation based at Directorate for Railways's premises. All hardware items of the administrator desktop workstation should be produced by same Manufacturer to optimize future maintenance costs.

The administrator desktop workstation must be able to set up the USB ports through BIOS to enable the use of only a mouse and keyboard, while disabling the use of all types of transfer and storage devices, ec individually enable and disable USB ports via BIOS.

2. Train Driver Registry System

2.1 Introduction

One of the many responsibilities of the Directorate for Railways defined by the Law on Railways ("Official Gazette of the RS", number 41/18) refers to the issuing of permits for driving a towing rail vehicle as well as keeping the Register of permits for driving a towing rail vehicle. Currently, over 2,000 people are employed in Serbia who have a valid permit to operate a towing rail vehicle. Most of the permits were issued in 2016 and 2017. Bearing in mind that all the necessary documentation for re-issuing and extending the validity of the license is submitted in hard copy together with the requests, there is currently a lot of administrative pressure on the Directorate of Railways. For this reason, there is a need for the roll-out of an information system that will enable the digitization of this process and the delivery of all necessary documentation through the portal on the website of the Directorate for Railways and the creation of a database of data into which the current registrar will be imported and issued a permit.

2.2 External interface

The external interface should be located on the website of the Directorate for Railways (web location: <u>https://www.raildir.gov.rs</u>). This should be done by creating a link leading to a special server where the driver registry will be hosted. The external interface should enable:

- 1) submission of a Request for the issuance of a permit for driving a towing vehicle and approval of the necessary documentation,
- 2) approving and updating the Certificate of Medical Fitness for train drivers, drivers and transporters, only for their employees, and
- 3) Electronic download of Decisions and Confirmations.

The external interface should be programable and adjustable if there is a change of form and scope of the Requests, Decisions and Confirmations.

2.3 Internal (administrative) interface

The internal (administrative) interface should enable the following functions of the train driver registry:

- 1) manual entry and approval of requests submitted in printed form;
- 2) checking the validity and up-to-dateness of the driver's health certificate;
- issuance of an order for access to external users for the function specified in *item 2* within 3. *External interface*. The login page should look similar to the login page of the National Vehicle Register (web location: <u>http://195.222.96.178/sNVR/Login/LoginView.aspx?ReturnUrl=%2fsnvr</u>)

- 4) possibility for the administrator to indicate which company the train driver belongs to (subdatabase that would contain a list of all certified railway undertakings) i.e. providing access to external users only for those train drivers whom they employ for the purpose of the procedures specified in items 2) and 3) *within 3. External interface*.;
- 5) creation of a dossier for each individual train driver with the necessary documents and data (externally or internally approved, in case of a written request);
- 6) possibility for the administrator to assess the fulfilment of the requirements in accordance with all the necessary conditions within the dossier;
- 7) possibility for automatic preparation for printing of documents: Reports, Decisions and Confirmations based on the data entered in the dossier;
- 8) database that contains all the information from the created dossier for each train driver;
- 9) migration of all existing data from the currently used Microsoft access file into a database;
- 10) possibility of searching through all contents of the database, by applying appropriate searching filters that would be agreed during implementation;
- 11) possibility of notifying the administrator about the imminent expiry or expiration of the Certificate of Health;
- 12) the possibility of outputting a document from the database an excel file for the "Kovnica Novca", which is currently printing Permits for driving a towing vehicle;
- 13) possibility of the option of direct printing of the Permit for entering with a towing vehicle on the output device from the moment when the Directorate for Railways provides adequate devices for that purpose;
- 14) Register should be General Data Protection Regulation (GDPR) compliant.

2.4 Database

The database, i.e. the dossier for each individual train driver, should contain the following data that would be entered manually (with the textual and electronic document that proves it):

- 1) personal data about the train driver (photo, name, surname, unique identity number, address, etc.);
- 2) data on professional training (diploma);
- 3) data on professional qualification (certificate of passing the professional exam, for which occupation the professional exam was passed);
- 4) data on health qualification (date of expiration of the medical certificate, health restrictions, executive position for which the examination was performed);
- 5) permit data (permit number, issuance date, expiration date, permit status);
- 6) information about the employer company (business name, reference number of the employee at the employer);
- 7) data on the administrative number of cases in the Directorate for Railways;
- 8) database should possess database internal consistency checks;

2.5 Ownership

The Train Driver Register will belong to the Directorate for Railways together with software code which need to be fully documented as per the best practices.

2.6 Language

The Train Driver Register content shall be available and optimized for the Serbian language.

2.7 Operation

Before putting the Train Driver Register into operation, the Bidder shall enable testing of the Register in a test environment for a period of 5 days. The Register will be put into operation after previously obtained approval by the Employer.

2.8 Training

The Bidder shall provide training on the use of all Train Driver Register functionalities as well as database maintenance for up to six (6) users of the Train Driver Register, before putting the Register into operation. The training should be accompanied by appropriate written material in the form of instructions together with a manual on how to use and maintain the database.

2.9 Warranty period, maintenance services and technical support

The warranty period should be **twelve months**. The problems that would arise within the warranty period, will be solved and implemented by the Bidder without any cost. The Bidder shall respond to the reported failure or problem by the Train Driver Register no later than 4 hours. Failures and problems will be reported using e-mail. The deadline for troubleshooting is 48 hours from reporting the failure or problem.

3. Offered functionalities

In accordance with the required Technical Specifications and Terms and Conditions of Supply, the Bidder needs to fill out the table with the offered functionalities.

Item No	Name of Services	Technical Specifications and Standards	Offered functionality
	Development of Train Driver Registry System	External interface as per Tech. Spec. clause 2.2	
		Internal (administrative) interface as per Tech. Spec. clause 2.3	
		Database as per Tech. Spec. clause 2.4	
1.		Ownership as per Tech. Spec. clause 2.5	
		Language as per Tech. Spec. clause 2.6	
		Operation as per Tech. Spec. clause 2.7	
		Warranty period, maintenance services and technical support as per Tech. Spec. clause 2.9	

Item No	Name of Services	Technical Specifications and Standards	Offered functionality
2.	Preparation and delivery of training and user operation and maintenance manuals	Training, preparation of training material, user operation and maintenance manuals for Train Driver Registry System as per Tech. Spec. clause 2.8	
		Processor: 14th Generation Intel® Core [™] i9-14900 vPro® Processor (E-cores up to 4.30 GHz, P-cores up to 5.40 GHz) or equivalent	
		Chipset : Intel Q670 or equivalent	
		SSD : Min 1 TB SSD M.2 2280 PCIe Gen4 TLC	
		Graphics Card: NVIDIA® GeForce RTX [™] 4060 8GB GDDR6 or equivalent	
		Integrated Audio Card	
		Memory: Min 32 GB DDR5- 4400MHz (UDIMM) - (2 x 16 GB), expandable up to 128 GB	
		Ports - Front:	
3.	Administrator desktop workstation supply and installation	 Min 1x USB-C® (USB 10Gbps / USB 3.2 Gen 2), with 15W power supply Min 2x USB-A (USB 10Gbps / USB 3.2 Gen 2) Min 2x USB-A (USB 5Gbps / USB 3.2 Gen 1) Min 1x headphone/microphone combo jack (3.5mm) Min 1x microphone (3.5mm) 	
		Ports - Back:	
		 Min 4x USB-A (USB 5Gbps / USB 3.2 Gen 1) Min 1x HDMI® 2.1 TMDS Min 2x DisplayPortTM 1.4a (HBR2, DSC) 	

Item No	Name of Services	Technical Specifications and Standards	Offered functionality
		• Min 1x line-out (3.5mm)	
		PCIe Slots : Min 2 x PCIe 4.0 x 16	
		Security: TPM 2.0	
		USB Port Configuration : USB ports must be configured via BIOS to allow only mouse and keyboard usage, disabling all types of transfer and storage devices; individual enabling and disabling of USB ports.	
		LAN: RJ45, 1 Gbps Ethernet	
		Keyboard : USB, YU from the same manufacturer as the offered computer	
		Mouse : USB, optical from the same manufacturer as the offered computer	
		Standards : EPEAT Registered, Energy Star 8.0, RoHS, ErP Lot 3, TCO Certified 9.0	
		Operating System: WINDOWS 11 Pro; the operating system offered must be new, never used, and non- refurbished.	
		Warranty: Min. 36 months manufacturer warranty; the warranty must be verifiable on the manufacturer's website using the device's serial number.	

Unless otherwise specified, the requirements in these Technical Specifications are presented as a **minimum standard**, which the offered services must meet to be compliant.