

**German Financial Cooperation with the „Western Balkan Six Chamber Investment Forum”  
(WB6-CIF)  
Regional Challenge Fund Project**

Procurement of machineries and equipment  
Europe (non-EU), Republic of Serbia (SER)  
Reference number: RCF/SER/300026/G/2025/001

The answers to requests for clarifications received by the potential bidders to the following e-mail address: [procurement@rcf-wb6.org](mailto:procurement@rcf-wb6.org)

<p><b>Q1</b></p>	<p><b>LOT 1: Fluidics/PLC Lab</b></p> <p><b>ITEM 1: Mobile double-sided standing workstation</b></p> <p>The current specification contains restrictive requirements that correspond exclusively to the "SybaWork" model (Festo), including an exact number of drawers, specific power supply electronics, and a requirement for the German national standard "GS mark," which is not mandatory in the Republic of Serbia (where the CE mark is valid). Additionally, the specific compressor tank volume ("24 l") restricts the offer of equivalent silent compressors.</p> <p><b>Proposed Amendment:</b> <i>"Mobile double-sided standing workstation for pneumatics, hydraulics, and sensor technology. For mounting and using electrical, pneumatic, and hydraulic components in training; approx. 1600 mm x 1800 mm x 800 mm (W x H x D) Includes the following components: Robust frame made of aluminum or steel profiles, powder-coated, robust table top made of at least 3-layer MDF board, surface with min. 0.8 mm HPL layer, resistant to scratching, heat, acids, caustic substances. The table edges are finished with robust, rounded ABS edge banding that is at least 2 mm thick. Standing container 500 mm x 600 mm x 800 mm (w x h x d). Mounting frame for electrical, pneumatic, and hydraulic components, usable on both sides. Cable rack for 4 mm safety connection cables. 2x Built-in power supply unit 24 V DC, power switch. Compressor, oil-lubricated, extremely quiet (&lt;45 db) with pressure reducer and water separator, 8 bar, 50 l/min. 2 set 4 mm safety laboratory cables, approx. 100 pieces, red, blue, and black: – 10x red 50 mm, 10x blue 50 mm, 8x black 50 mm, 8x red 300 mm, 8x blue 300 mm, 18x black 300 mm, 8x red 500 mm, 8x blue 500 mm, 18x black 500 mm, 2x red 1000 mm, 3x blue 1000 mm, 2x black 1000 mm, 1x red 1500 mm, 1x blue 1500 mm, 1x black 1500 mm"</i></p>
<p><b>A1</b></p>	<p><b>Technical specifications remain unchanged.</b></p>
<p><b>Q2</b></p>	<p><b>LOT 1: Fluidics/PLC Lab</b></p> <p><b>ITEM 2: Basic pneumatic equipment set</b></p> <p>The description contains a direct Festo catalog number (539770) for the "dual pressure valve," which is strictly prohibited, we request this to be changed to the standard education platform. Furthermore, the specification requires "silver" hoses, which is a commercial designation for a specific brand. Furthermore, the text mandates that logic is taught using "GRAF CET". GRAF CET (IEC 60848) is a descriptive language/methodology, not a hardware specification. Linking the procurement of pneumatic hardware to a specific didactic methodology implicitly favors the specific training materials (manuals/courseware) of one manufacturer (Festo), while excluding other vendors who utilize equally valid industrial standards for logic definition (such as IEC 61131-3 SFC, Logic Block Diagrams, or Boolean algebra). The Technical Specification for hardware must remain neutral regarding the pedagogical method used to explain the hardware's function.</p>

	<p><b>Proposed Amendment:</b> "Basic pneumatic equipment set. Equipment set for teaching the physical fundamentals and the function and use of pneumatic control components. Didactically prepared teaching and learning materials to support classroom work and achieve learning objectives. The device set consists of the following prepared industrial components, including mounting plate: 2x 3/2-way valve with push button, normally closed, 1x 3/2-way valve with push button, normally open, 1x 5/2-way valve with selector switch, 1x 3/2-way valve with selector switch, normally closed, 2x 3/2-way roller lever valve, normally closed, 2x proximity switch, pneumatic, with cylinder mounting, 1x pneumatic timer, normally closed, 1x pressure switch valve, 1x 3/2-way valve, single-sided compressed air operated, 1x 5/2-way valve, single-sided compressed air operated, 3x 5/2-way pulse valve, double-sided compressed air operated, 1x changeover valve (OR), 1x dual pressure valve (AND), 1x quick exhaust valve, 2x throttle check valve, 1x single-acting cylinder, 1x double-acting cylinder, 1x switch valve with filter control valve, 1x pressure control valve with pressure gauge, 2x pressure gauges, 1x manifold block, 2x plastic hose - 4 x 0.75 10 m"</p>
A2	<p>Please refer to Corrigendum 03.</p>
Q3	<p><b>LOT 1: Fluidics/PLC Lab</b></p> <p><b>ITEM 3: Software application for creating and simulating pneumatic and electro-pneumatic circuit diagrams</b></p> <p>The requirement for the software to explicitly cover "GRAFCET (EN 60848)" favors specific software packages (specifically FluidSIM) that feature a dedicated module for this standard. In industrial practice and education, control logic is equally validly simulated using other standards such as IEC 61131-3 (Ladder Diagram, SFC) or standard electrical control schematics. Mandating a specific descriptive standard (GRAFCET) restricts the choice of simulation software to those aligned with one specific didactic philosophy. We request the removal of this specific line item to allow for any software that can simulate sequential control logic.</p> <p><b>Proposed Amendment:</b> "Software application for creating and simulating pneumatic and electro-pneumatic circuit diagrams, extensive component library, integration of real and virtual measuring devices, for Windows 11. Minimum subject areas to be covered: – Pneumatics / electropneumatics – Control pneumatics – Vacuum technology – Electrical controls – Digital technology"</p>
A3	<p>Please refer to Corrigendum 03.</p>
Q4	<p><b>LOT 1: Fluidics/PLC Lab</b></p> <p><b>ITEM 4: Device set for basics of electro-pneumatic controls</b></p> <p>The requirements for components are overly descriptive of the physical construction of one manufacturer's didactic modules rather than their technical function. Specifically, "actuated from the left" and "actuated from the right" refer to the specific mechanical housing of Festo didactic limit switches, not to the industrial function of the switch itself. Similarly, "Pulse" valves and "3-way" relays refer to specific didactic implementations. Standard industrial components do not have inherent "left/right" actuation directions defined in their procurement data. Retaining this phrasing restricts the tender to vendors using that specific mounting system.</p> <p><b>Proposed Amendment:</b> "Device set for teaching the basics of electro-pneumatic controls, the functional principles of the components, and troubleshooting. The device set consists of the following refurbished industrial components, including mounting plate: 1x signal input, electrical, 2x relays, 1x limit switch, electrical, 1x proximity switch, 2x proximity switches, electronic, with cylinder mounting, 1x 2 x 3/2-way solenoid valve with LED, normally closed, 1x 5/2-way solenoid valve with LED, 2x 5/2-way solenoid valve with LED, 1x pressure sensor with display, 4x throttle check valve, 1x single-acting cylinder, 2x double-acting cylinders, 1x switch valve with filter control valve, 1x manifold block,</p>

	<i>1x plastic hose - 4 x 0.75 10 m. Didactically prepared teaching and learning materials to support classroom work and achieve learning objectives"</i>
<b>A4</b>	<b>Please refer to Corrigendum 03.</b>
<b>Q5</b>	<p><b>LOT 1: Fluidics/PLC Lab</b></p> <p><b>ITEM 6: Device set for digitizing pneumatic controls</b></p> <p>The specification uses the protected trademark "EduTrainer," which must be replaced with a generic term. Furthermore, the detailed list of accessories (e.g., "filter cartridges... clogged", "power strip") corresponds to a specific proprietary Bill of Materials (BOM) for a pre-packaged maintenance kit from a single vendor. Mandating specific "clogged cartridges" forces other bidders to artificially manufacture defective parts to match a specific Festo exercise. The specification should define the capability to teach maintenance, not the specific proprietary consumables required to do so on one brand's equipment.</p> <p><b>Proposed Amendment:</b> <i>"Device set for digitizing pneumatic controls, used for teaching basic knowledge of intelligent maintenance and the collection of operating data. Learning objectives supported: selection of suitable sensors for collecting digital data, analysis of digital data for condition monitoring, implementation of a network system for receiving digital data. The device set consists of at least the following prepared industrial components, including mounting plate: 1x proportional pressure control valve with display, 1x flow sensor, 0.5–50 l/min, analog, 1x emergency stop button, electric, 1x PLC Unit with SIMATIC S7-1200, 1x Simatic Step 7 (TIA Portal) V15 software, de/en/es/fr, 3x Ethernet cable, RJ45, CAT5, 1x access point, WLAN router, 1x mini desktop PC, 1x double-acting cylinder, defective, 2x proximity switches, electronic, with cylinder mounting, 1x filter cartridges for switch-on valve with filter control valve, Power cable. Didactically prepared teaching and learning materials to support classroom work and achieve learning objectives"</i></p>
<b>A5</b>	<b>Please refer to Corrigendum 03.</b>
<b>Q6</b>	<p><b>LOT 1: Fluidics/PLC Lab</b></p> <p><b>ITEM 9: Installation and training</b></p> <p>The terminology "Fluidics + PLC" in the training description appears to be a copy-paste of a specific commercial training package name from a single vendor's catalog. The training must refer generally to the equipment supplied in this Lot, not to a proprietary "Fluidics" package. We request the removal of this term to ensure the training requirement applies generically to the supplied equipment.</p> <p><b>Proposed Amendment:</b> <i>"Installation of hardware and software and training for operation, didactic-methodological deployment and maintenance (O&amp;M) of the specified training equipment. The laboratory equipment will be installed by the supplier and handed over ready for operation (all electrical connection points are provided by the customer). The training personnel will be able to operate the experimental equipment, use it for training purposes, and carry out the necessary maintenance work. Target group: Up to 6 participants with completed electrical engineering training. 8 hours per day"</i></p>
<b>A6</b>	<b>Technical specifications remain unchanged.</b>
<b>Q7</b>	<b>LOT 2: Electronics and Electrical Engineering Lab</b>

	<p><b>ITEM 2: Software application for creating and simulating electrical and electronic circuit diagrams</b></p> <p>The specification lists "GRAFCET" as a mandatory subject area for the Electronics simulation software. GRAFCET (IEC 60848) is a standard for documenting sequential control logic (automation/PLCs), not for simulating core electronics and electrical engineering circuits (AC/DC, semiconductors, amplifiers). Standard industrial and educational electronics simulation software (based on SPICE models) does not typically include GRAFCET, as it belongs to the domain of Automation/Fluid power (Lot 1). Including this requirement in Lot 2 effectively disqualifies all specialized electronics simulation software and restricts competition to a single "multi-physics" didactic software package. We demand the removal of "GRAFCET" from Lot 2 to allow the offer of specialized electronics simulation tools.</p> <p><b>Proposed Amendment:</b> "Software application for creating and simulating electrical and electronic circuit diagrams, extensive component library, integration of real and virtual measuring devices, license for Windows 11 Minimum subject areas to be covered: – Direct current technology – Alternating current technology – Semiconductor components – Basic electronic circuits – Automotive engineering – Analog technology – Digital technology – Control engineering – Contact-based circuits – Electrical drive technology"</p>
A7	<p><b>Please refer to Corrigendum 03.</b></p>
Q8	<p><b>LOT 2: Electronics and Electrical Engineering Lab</b></p> <p><b>ITEM 3: Device set for converter-controlled drive technology</b></p> <p>The current specification explicitly references a specific commercial brand and model: "Sinamics G120" (Siemens). Under the Law on Public Procurement, naming a specific make or source is prohibited unless justified by the subject matter, which is not the case here as equivalent frequency converters exist. Additionally, the term "Industrial software" is ambiguous. It creates uncertainty whether full commercial factory licenses are required or if educational/standard versions (which are industry-standard for training) are acceptable. We demand the removal of the specific brand name "Sinamics" and the restrictive adjective "Industrial" to allow for the offer of equivalent systems.</p> <p><b>Proposed Amendment:</b> "Device set for converter-controlled drive technology. The device set provides knowledge and skills in the fundamentals of drive technology with industrial frequency converters and enables the following learning objectives to be achieved: • Understanding the function of frequency converters and the principles of speed control for three-phase motors • Navigating through the parameters of a frequency converter and changing the parameters based on a specific application • Becoming familiar with control circuits and advanced functions of variable frequency drives, e.g., acceleration and deceleration, motor braking, pulse operation, and protection • Installing, maintaining, and troubleshooting a frequency converter. The device set contains the hardware and software components required to carry out practical exercises to achieve the learning objectives. EMC motor cable. Software for parameterization, commissioning, optimization, diagnostics, and control. Didactically prepared teaching and learning materials to support classroom work and achieve the learning objectives"</p>
A8	<p><b>Technical specifications remain unchanged.</b></p>
Q9	<p><b>LOT 3: Mechatronics &amp; Industry 4.0</b></p> <p><b>ITEM 1: Learning factory Distributing, joining, measuring, and sorting</b></p> <p>The specification lists a separate "IoT gateway" (Item 8) as a mandatory hardware module. This enforces a specific network topology characteristic of one manufacturer's legacy system (Festo CP Lab). In modern Industry 4.0 solutions, IoT functionality (OPC UA, MQTT) is often integrated directly</p>

	<p>into the PLC or the Manufacturing Execution System (MES) without the need for a discrete physical gateway module. Mandating this specific hardware component excludes more modern, integrated architectures. Additionally, the restrictive compressor volume of "24 l" is cited again and must be removed.</p> <p><b>Proposed Amendment for third part of item specification:</b> <i>"The learning system consists of the following modules: 1. Storage and distribution, 2. Joining with information from RFID tags, 3. Measuring various product properties, 4. Sorting based on measurement results, 5. Transport support with mobile robots, 6. Machine safety with typical safety devices, 7. Energy efficiency monitoring hardware and software, 8. Integrated error simulation unit, 9. Compressor, oil-lubricated, extremely quiet (&lt;45 db) with pressure reducer and water separator, 8 bar, 50 l/min, 10. Tool set for carrying out conversion and maintenance work on the training factory, 11. Universal 3D simulation system industrial platform for creating and using 3D simulation models for automation technology, 12. Didactically prepared teaching and learning materials to support classroom work and achieve learning objectives"</i></p>
A9	<p><b>Technical specifications remain unchanged.</b></p>
Q10	<p><b>LOT 3: Mechatronics &amp; Industry 4.0</b></p> <p><b>ITEM 2: Practical training environment for sensor technology</b></p> <p>The text explicitly names the brand "IFM" ("adapted for the training environment (IFM)"), which is a direct violation of competition rules. The brand name must be deleted.</p> <p><b>Proposed Amendment:</b> <i>"...Intelligent sensors adapted for the training environment for Industry 4.0: IO-Link communication master module, connecting cables, optical sensor, inductive sensor, ultrasonic sensor. IO-Link® Bluetooth interface adapted for the training environment. Sensors adapted for the training environment: RFID sensor with IO-Link..."</i></p>
A10	<p><b>Technical specifications remain unchanged.</b></p>
Q11	<p><b>LOT 3: Mechatronics &amp; Industry 4.0</b></p> <p><b>ITEM 3: Accessories for mechatronics equipment</b></p> <p>The specification for the compressor includes a strictly defined tank volume of "24 l". This specific volume, combined with the noise level requirement (&lt;45 dB), corresponds exactly to a specific model from a single manufacturer (e.g., Jun-Air/Festo), whereas other reputable manufacturers of silent laboratory compressors offer tank sizes of 15l, 25l, or 30l that perform the exact same function. Defining the exact tank volume is unnecessary for the functional performance of the system (which is determined by pressure and flow rate) and serves only to restrict competition. We demand the removal of the specific "24 l" reference to allow for the offer of any silent compressor with adequate capacity.</p> <p><b>Proposed Amendment:</b> <i>"Accessories for mechatronics equipment 4x Fault simulation box for generating intentional faults in the process sequence of stations or modules. Enables the teaching of comprehensive knowledge of the functions and sequences as well as the maintenance of mechatronic systems. 1x Compressor, oil-lubricated, extremely quiet (&lt;45 db) with pressure reducer and water separator, 8 bar, 50 l/min 1x Tool set for carrying out conversion and maintenance work on the training factory"</i></p>
A11	<p><b>Technical specifications remain unchanged.</b></p>

<p><b>Q12</b></p>	<p><b>LOT 3: Mechatronics &amp; Industry 4.0</b></p> <p><b>ITEM 4: Access to learning platform, 25 licenses for 5 years</b></p> <p>The requirement for "AI support for the creation of new and self-created learning content" is legally ambiguous and technically undefined. The term "AI support" is not a standardized technical specification. It provides no measurable parameters: What specific AI algorithms are required? What data privacy standards (GDPR) must the AI meet regarding student data? Is it Generative AI or simple heuristic automation? Including such a vague, buzzword-based requirement violates the principle of legal certainty and makes objective evaluation of bids impossible. It grants the Evaluation Committee discretionary power to reject valid software simply because it doesn't match a specific "AI" marketing feature of a preferred vendor. We demand the removal of this undefined requirement to ensure the software is evaluated based on its core educational value (content coverage, simulation capabilities), not vague marketing terms.</p> <p><b><i>Proposed Amendment:</i></b> "Access to learning platform, 25 licenses for 5 years The learning platform provides multimedia content and courses in the fields of electrical engineering and energy generation, process automation, renewable energies, factory automation, fluid technology, IIoT, and Industry 4.0. Integrated simulation of circuitsSupport for the specified hardware of the learning factory and sensor technology Didactically prepared teaching and learning materials to support classroom work and achieve learning objectives"</p>
<p><b>A12</b></p>	<p><b>Technical specifications remain unchanged.</b></p>

**Note:** During the preparation of Bids, use **Annex 1 – Technical specifications Corrigendum 03.**