

# ***ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER***

**Contract title: Support to strengthening fight against trafficking in Human Beings**

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**Publication reference :** EuropeAid/139438/IH/SUP/RS

**Columns 1-2 should be completed by the Contracting Authority**

**Columns 3-4 should be completed by the tenderer**

**Column 5 is reserved for the evaluation committee**

Annex III - the Contractor's technical offer

The tenderers are requested to complete the template on the next pages:

- Column 2 is completed by the Contracting Authority shows the required specifications (not to be modified by the tenderer),
- Column 3 is to be filled in by the tenderer and must detail what is offered (for example the words “compliant” or “yes” are not sufficient)
- Column 4 allows the tenderer to make comments on its proposed supply and to make eventual references to the documentation

The eventual documentation supplied should clearly indicate (highlight, mark) the models offered and the options included, if any, so that the evaluators can see the exact configuration. Offers that do not permit to identify precisely the models and the specifications may be rejected by the evaluation committee.

The offer must be clear enough to allow the evaluators to make an easy comparison between the requested specifications and the offered specifications.

## ***1. PROJECT DESCRIPTION***

The purpose of this contract is purchase of vehicles, office furniture, IT equipment, audio-video equipment, as well as surveillance equipment for the Serbian Police authorities, in order to improve their capacities in fight against the trafficking of human beings (THB).

Department for Contracting and Financing of EU Funded Programmes (CFCU) of the Ministry of Finance of the Republic of Serbia is the Contracting Authority responsible for this project. The beneficiary of this Contract (Beneficiary) is the Ministry of Interior.

**August 2018**

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## **2. DELIVERY LOCATIONS**

2.1 The delivery addresses for the equipment which is subject of this contract is specified under point 4 of this technical specification/offer. The Supplier shall agree the installation schedule with the Contracting Authority in consultation with the Beneficiary. The Beneficiary shall guarantee the Supplier's free entrance to the buildings and relevant room(s) during the installation works. The Supplier shall be fully responsible for its equipment until the provisional acceptance has been issued.

## **3. GENERAL PROVISIONS**

### **3.1. General Requirements**

- 3.1.2. All the equipment shall be provided brand new, complete with the necessary accessories and/or parts such as to ensure that the unit is capable of operating to the required technical and quality specifications.
- 3.1.3. Equipment which allows upgrading of capacities shall be provided in such a way that upgrades can be performed by installing additional capacity without discarding the already installed capacities.

### **3.2. Power supply standard**

Unless otherwise stated in the Detailed Technical Specifications, all electrical equipment should be powered with 220V, 50Hz AC. All devices must be compliant with Serbian and European Union electrical safety standards and follow EEC CE Marking Directive.

### **3.3. Post-Completion Documentation**

Where required, the Contractor will be responsible for preparation of Technical Post-Completion Documentation describing the system implemented. It should include graphical description of interconnection between various elements, all hardware and software configuration details, start-up scripts and a description of mandatory maintenance procedures to be followed by the Beneficiary during day-to-day operation of the equipment. The Post-completion Documentation will be subject to approval of the Contracting Authority.

## ANNEX II – TECHNICAL SPECIFICATIONS

### LOT 3: Supply of IT Equipment and Infrastructure

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
1	<p><b>Desktop Computer</b></p> <p><b>Quantity: 96</b></p> <ul style="list-style-type: none"> <li>- Case type: Mini or Midi tower</li> <li>- CPU: min. 4 core, release date after 01 January 2017</li> <li>- RAM memory at least 8 GB</li> <li>- hard drive at least 1TB</li> <li>- HD graphics (integrated)</li> <li>- optical drive DVD+/-RW</li> <li>- networking: 10/10/1000 gigabit Ethernet</li> <li>- USB ports:               <ul style="list-style-type: none"> <li>o At least 4 USB ports (total)</li> <li>o at least 2 x USB 3.0 (out of total 4)</li> <li>o at least 2 USB ports at front of the case of which at least 1 must be USB 3.0</li> </ul> </li> <li>- mini jack port,</li> <li>- USB keyboard and optical mouse 3 buttons</li> <li>- monitor, same brand as PC:               <ul style="list-style-type: none"> <li>o at least 21"</li> <li>o supported resolution 1920 x 1080 Full HD</li> <li>o Aspect ratio 16:9</li> </ul> </li> <li>- Operating system with lifetime license, compatible with Active Directory and Trusted Platform Module (TPM)</li> </ul>	<p><b>Manufacturer:</b></p> <p><b>Model:</b></p>		

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
2	<p><b>PC Workstation with UPS</b></p> <p><b>Quantity: 8</b></p> <ul style="list-style-type: none"> <li>- Case type: Mini or Midi tower</li> <li>- CPU: min. 4 core, release date after 01 January 2017</li> <li>- RAM memory at least 8 GB expandable to at least 16 GB</li> <li>- hard drive at least 1TB</li> <li>- graphic adapter with at least 512MB dedicated memory</li> <li>- optical drive DVD+/-RW</li> <li>- networking: 10/10/1000 gigabit Ethernet</li> <li>- USB ports: <ul style="list-style-type: none"> <li>o At least 4 USB ports (total)</li> <li>o at least 2 x USB 3.0 (out of total 4)</li> <li>o at least 2 USB ports at front of the case of which at least 1 must be USB 3.0</li> </ul> </li> <li>- mini jack port,</li> <li>- multi card reader</li> <li>- USB keyboard and optical mouse 3 buttons</li> <li>- monitor, same brand as PC: <ul style="list-style-type: none"> <li>o at least 21"</li> <li>o supported resolution 1920 x 1080 Full HD</li> <li>o Aspect ratio 16:9</li> </ul> </li> <li>- UPS: <ul style="list-style-type: none"> <li>o Capacity min. 1.000 VA</li> <li>o Input Plug 230V</li> </ul> </li> </ul>	<p><b>Manufacturer:</b></p> <p><b>Model:</b></p>		

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<ul style="list-style-type: none"> <li>○ Number of PS Outlets: at least 3</li> <li>○ On Battery Output Voltage: Simulated Sine Wave at 230Vac +/- 5%</li> <li>○ Surge Protection</li> <li>○ On Battery Output Frequency: 50Hz / 60 Hz +/- 3%</li> </ul> <p>- Operating system with lifetime license, compatible with Active Directory and Trusted Platform Module (TPM)</p>			
3	<p><b>Laptop Type 1</b></p> <p><b>Quantity: 8</b></p> <ul style="list-style-type: none"> <li>- 14"- 15" anti-glare LED- Backlight screen</li> <li>- CPU: min. 4 core, release date after 01 June 2017</li> <li>- RAM: at least 8GB</li> <li>- Disk size: at least 240GB SSD</li> <li>- Screen resolution at least 1920x1080 HD native</li> <li>- Dedicated HD graphics with at least 1024MB memory</li> <li>- Battery life at least 7 hours</li> <li>- At least 3 USB ports including at least one USB 3.0 port;</li> <li>- 1 HDMI;</li> <li>- Connectivity: <ul style="list-style-type: none"> <li>○ 10/100/1000Base-TX LAN,</li> <li>○ WiFi 802.11n</li> <li>○ Bluetooth</li> </ul> </li> <li>- SD card reader</li> </ul>	<p><b>Manufacturer:</b></p> <p><b>Model:</b></p>		

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<ul style="list-style-type: none"> <li>- integrated microphone and webcam</li> <li>- audio</li> <li>- maximum weight: 2,6 kg</li> <li>- AC adaptor</li> <li>- Additional equipment:               <ul style="list-style-type: none"> <li>o External DVD+/-RW drive                   <ul style="list-style-type: none"> <li>▪ USB 3.0 interface, USB 2.0 compliant</li> <li>▪ CD/DVD burning software included</li> </ul> </li> <li>o External optical mouse 3 buttons</li> <li>o 1 x flash drive 64GB USB 3.0</li> <li>o Shock-Resistant External Portable Hard Drive                   <ul style="list-style-type: none"> <li>▪ At least 2TB capacity</li> <li>▪ USB 3.0 interface</li> <li>▪ Maximum weight 0.25 kg</li> <li>▪ Accessories allowing for correct operation with low powered USB 2.0 ports (e.g. Y-cable or external power supply)</li> </ul> </li> </ul> </li> <li>- Carry case, adequate for carrying the laptop and all accessories specified above</li> <li>- Operating system with lifetime license, compatible with Active Directory and Trusted Platform Module (TPM)</li> </ul>			
4	<p><b>Laptop Type 2</b></p> <p><b>Quantity: 7</b></p> <ul style="list-style-type: none"> <li>- 15,6" anti-glare LED- Backlight screen</li> <li>- CPU: min. 4 core, at least 6MB Cache, release</li> </ul>	<p><b>Manufacturer:</b></p> <p><b>Model:</b></p>		

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>date after 01 June 2017</p> <ul style="list-style-type: none"> <li>- RAM: at least 8GB expandable to at least 32 GB</li> <li>- Disk size: at least 240GB SSD</li> <li>- Screen resolution at least 1920x1080 HD native</li> <li>- Dedicated HD graphics with at least 4096 MB memory</li> <li>- Battery life at least 5 hours</li> <li>- At least 3 USB ports including at least one USB 3.0 port;</li> <li>- 1 HDMI;</li> <li>- Connectivity: <ul style="list-style-type: none"> <li>o 10/100/1000Base-TX LAN,</li> <li>o WiFi 802.11n</li> <li>o Bluetooth</li> </ul> </li> <li>- SD card reader</li> <li>- integrated microphone and webcam</li> <li>- audio</li> <li>- maximum weight: 2,7 kg</li> <li>- AC adaptor</li> <li>- Additional equipment: <ul style="list-style-type: none"> <li>o External DVD+/-RW drive <ul style="list-style-type: none"> <li>▪ USB 3.0 interface, USB 2.0 compliant</li> <li>▪ CD/DVD burning software included</li> </ul> </li> <li>o External optical mouse 3 buttons</li> <li>o 1 x flash drive 64GB USB 3.0</li> <li>o Shock-Resistant External Portable</li> </ul> </li> </ul>			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Hard Drive</p> <ul style="list-style-type: none"> <li>▪ At least 2TB capacity</li> <li>▪ USB 3.0 interface</li> <li>▪ Maximum weight 0.25 kg</li> <li>▪ Accessories allowing for correct operation with low powered USB 2.0 ports (e.g. Y-cable or external power supply)</li> </ul> <p>- Carry case, adequate for carrying the laptop and all accessories specified above</p> <p>- Operating system with lifetime license, compatible with Active Directory and Trusted Platform Module (TPM)</p>			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
5	<p><b>Hyper-Converged Server Infrastructure – Fully Functional Turn-Key Solution</b> <b>Quantity: 3</b></p> <p>The ordered solution must be composed of at least following elements:</p> <p>a) <u>Rack</u> (1 piece. per item)</p> <ul style="list-style-type: none"> <li>– Height suitable for mounting all elements of the HCI specified in this TS and at least 4 U <b>spare</b> space after mounting all elements of the HCI</li> <li>– all elements necessary for mounting HCI components;</li> <li>– PDU ensuring connection of all HCI components;</li> <li>– electrical installation for all installed system components;</li> <li>– grounding wires;</li> <li>– removable front door with lock;</li> </ul> <p>b) <u>Chassis</u> (1 piece. per item)</p> <ul style="list-style-type: none"> <li>– Rack mount – to be mounted in the rack specified under p. a)</li> <li>– Chassis capacity: at least 4 nodes</li> <li>– Redundant supply for server nodes</li> </ul> <p>c) <u>Server node</u> – (3 pieces per item)</p> <ul style="list-style-type: none"> <li>– To be installed in the delivered chassis</li> </ul>			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>specified under p. b)</p> <ul style="list-style-type: none"> <li>- Number of processors: <u>2</u></li> <li>- CPU release date not later than March 2016</li> <li>- Cores per processor: 10</li> <li>- RAM: at least 128GB expandable up to at least 1.5TB</li> <li>- 6TB of raw space of which 30% (+/- 3%) must be with SSD 3 DWPD Enterprise Flash drives</li> <li>- Network interfaces: <ul style="list-style-type: none"> <li>o 2 x 10Gb/s</li> <li>o 2 x 1Gb/s</li> <li>o 1 Ethernet interface for hardware management</li> </ul> </li> </ul> <p>d) <u>Hyper-Converged software</u> (for 3 offered server nodes per item)</p> <ul style="list-style-type: none"> <li>- Software must provide possibility of creating distributed fail system on cluster nodes using local disks in nodes</li> <li>- Software have to provide implementation of redundancy and availability mechanism in case of failure on one of the nodes</li> <li>- Support for hypervisors from other producers: at least VMware ESXi, and Microsoft Hyper-V;</li> <li>- Support for disk data auto-tiering</li> <li>- Support for iSCSI and Fibre Channel</li> <li>- Support for caching of read and write</li> </ul>			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>storage operations for maximum performance</p> <ul style="list-style-type: none"> <li>– Support for data protection using snapshot mechanism</li> <li>– Support for automated restart of VMs in the case of hardware or OS failure</li> <li>– Support for live migration of VMs with no user interruption or service loss</li> <li>– Support for agentless data protection, VM backup and recovery with built-in deduplication</li> <li>– Support for data protection using data replication on second location</li> <li>– Support for management via REST API</li> <li>– All third-party software (e.g. OS) necessary for launching and proper functioning of the HCI with corresponding lifetime licenses</li> <li>– Manufacturer support and software update for 3 years must be included</li> <li>– Lifetime license</li> </ul> <p>e) <u>Firewall software</u> (1 piece per item)</p> <ul style="list-style-type: none"> <li>– Support for solution installation within virtual machine</li> <li>– Support for AV, Antispam Services, Botnet IP/Domain, IDS/IPS, Web Filtering and Application Control,</li> <li>– Possibility of recognition and filtering traffic by type of application</li> </ul>			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<ul style="list-style-type: none"> <li>- Possibility of recognition and filtering of traffic by user name based on information from Active Directory</li> <li>- Support for static and dynamic (RIP, OSPF, BGP) traffic routing</li> <li>- Prevention threats, malware and botnet of traffic based on information from producer for minimum 3 years</li> <li>- Traffic prevention based on URL category based on information from producer for minimum three years</li> <li>- Support for site-to-site and remote access VPN</li> <li>- Firewall throughput 15Gbps</li> <li>- Threat prevention throughput 1Gbps</li> <li>- IPSec VPN throughput 1.5Gbps</li> <li>- IPS throughput 5Gbps</li> </ul> <p>f) <u>Ethernet switch</u> (2 piece per item)</p> <ul style="list-style-type: none"> <li>- Rack mount – to be mounted in the rack specified under p. a)</li> <li>- Ports: <ul style="list-style-type: none"> <li>o 24 x Gigabit Ethernet RJ-45</li> <li>o 4 x SFP+ ports for speeds up to 10Gbps</li> <li>o 2 x QSFP+ ports for speeds up to 40Gbps</li> </ul> </li> <li>- Supported Maximum PPS (Packets Per Second) at least 425Mpps</li> </ul>			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<ul style="list-style-type: none"> <li>– Support for Jumbo Frames</li> <li>– Support for switching capacity of at least 275Gbps</li> <li>– Support for up to 8000 MAC address</li> <li>– Support for configuration up to 4095 (min. 512 active VLAN)</li> <li>– IEEE 802.1D Spanning Tree Protocol (STP)</li> <li>– IEEE 802.1s Multiple STP (MSTP)</li> <li>– IEEE 802.1w Rapid STP (RSTP)</li> <li>– IEEE 802.1p Class of Service (CoS) prioritization</li> <li>– IEEE 802.1Q Tagged VLAN (frame tagging on all ports when VLANs are enabled)</li> <li>– IEEE 802.1x port-based authentication</li> <li>– IEEE 802.3 10BASE-T Ethernet</li> <li>– IEEE 802.3u 100BASE-TX Fast Ethernet</li> <li>– IEEE 802.3ab 1000BASE-T copper twisted-pair Gigabit Ethernet</li> <li>– IEEE 802.3z 1000BASE-SX short range fiber optics Gigabit Ethernet</li> <li>– IEEE 802.3z 1000BASE-LX long range fiber optics Gigabit Ethernet</li> <li>– IEEE 802.3ad Link Aggregation Control Protocol</li> <li>– IEEE 802.3x Full-duplex Flow Control</li> <li>– IEEE 802.3ae 10GBASE-SR short range fiber optics 10 Gb Ethernet</li> <li>– IEEE 802.3ae 10GBASE-LR long range</li> </ul>			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>fiber optics 10 Gb Ethernet</p> <ul style="list-style-type: none"> <li>- 10GSFP+Cu SFP+ Direct Attach Copper</li> </ul> <p>g) UPS (2 piece per item)</p> <ul style="list-style-type: none"> <li>- Mounted in the delivered rack specified under p. a)</li> <li>- In voltage: 200-240V</li> <li>- In frequentation: 50/60Hz</li> <li>- Type of in connector: IEC 320 C20 (16A)</li> <li>- Support for additional external battery module</li> <li>- Module for network communication</li> <li>- LCD Panel for tuning and diagnostic</li> <li>- USB and RS232 ports for communication</li> <li>- Hold-up time: minimum 60 min for the entire delivered HCI elements with 10% spare power. The Tenderer is required to include in the offer detailed calculation of the hold-up time for the offered solution</li> </ul> <p><b>One-day training for utilization of this item will be organized for small group of participants, at the time and place determined by the Beneficiary. It will be Contractor's job to design and deliver the training, engaging experienced trainer/engineer/technician, and providing translation if necessary.</b></p>			

#### 4. DISTRIBUTION LIST

##### LOT 3: Supply of IT Equipment and Infrastructure

Item No.:	SBPOK/Central unit Belgrade	Belgrade Police Unit	Novi Sad Police Unit	Nish police unit	CHTVP Belgrade	Regional Police Depts.	Mol IT Sector	Grand Total
1	20	6	4	3		63		96
2	2	2	2	2				8
3	4	2	1	1				8
4	7							7
5							3	3

#### Appendix I – Verification operations and warranty conditions

**Installation:** The Contractor will be responsible for installation, configuration and start-up of the supplies delivered in accordance with the directions provided by the Beneficiary. The Contractor will be also responsible for integration of the supplies delivered with the existing infrastructure, if required by the nature of the supplies provided. The Beneficiary reserves the right to delegate 2 of its employees to actively participate in the installation and configuration phase together with the Contractor's implementation team. The Contractor will be responsible for integration of the supplies delivered with the existing networking infrastructure. This may require the update of the configuration of the existing routers, firewalls and switches.

Contractor will be responsible for installation, configuration and start-up of the server operating systems.

**Testing:** Items shall be tested during the takeover event, where all the required specifications and features shall be accounted for, and full functionality of the items shall be presented.

**Training:** For Items 1 to 4 of this Lot, no specific training is foreseen for the items stated in this Lot, except for the basic introduction to the items. For Item 5 of this lot, specific training shall be organized, as described in the Technical Specifications.

**Warranty:** Warranty for this Lot is 12 months, starting from the date of issuance of Provisional Acceptance Certificate.

**Commercial warranty:** Commercial warranty for this Lot is minimum 12 months, starting from the date of issuance of Final Acceptance Certificate.