**Annex 1**

**Technical Specifications**

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| **Item no.**  | **Generic Description** |
| **Lot 1** |
| **1** | **Server with virtualization solution/ 2 pc.** |
| - | Form factor: Rack mount 1U |
| - | Processor 1: Similar to Intel Xeon CLX-SP 4208 |
| - | Processor 2: Similar to Intel Xeon CLX-SP 4208 |
| - | RAM: 8x32GB RDIMM, DDR4-2933MT/s, Dual Rank, extendable to 768GB |
| - | Storage controller: RAID controller: 2GB flash-backed write cache, RAID: 0, 1, 5, 6, 10, 50, 60 |
| - | Disks: 8 x 2TB 7.2K RPM SATA 6Gbps 512N, 128M 2.5 in Hot-plug Hard Drive |
| - | Extendable up to 10 x 2.5" Hard Drives |
| - | Power supply: Dual, Hot-plug, Redundant Power Supply |
| - | Network interfaces: 4x 1GbE BASE-T ports, 2 x 10 GbE SFP+ ports I/O Virtualization support for VMware NetQueue and Microsoft VMQ |
| - | Ports: Front ports: 1 x USB 2.0 |
| - | Rear ports: 1x Serial, 2 x USB 3.0 |
| - | Front or rear 1 x VGA port |
| - | Diagnostic LEDs: On front panel |
| - | Server management (SM): Local and remote control of system resources (manage, diagnose and monitor) |
| - | Remote power control, remote firmware updating, remote presence |
| - | Support management interfaces IPMI2.0, WEB, WSMAN, SNMP, SSH |
| - | LDAP user authentication, Active Directory |
| - | Support protocols IPv4, IPv6, DNS, DDNS, DHCP |
| - | Support of Single Sign-on and 2FA |
| - | Notifications for alerts SNMP, Email, IPMI |
| - | Browser based administration with, full control over the remote host server's display; keyboard, and mouse, including host OS graphical interface |
| - | Virtual media option that provides virtual CD drive and remote image mounting |
| - | SM & server diagnostics logging |
| - | Rack mounting rails: Sliding Rails with Cable Management Arm |
| - | Supported operating systems: Canonical Ubuntu LTS, Citrix XenServer, Microsoft Windows Server with Hyper-V, Red Hat, SUSE Linux Enterprise Server, VMware ESXi |
| - | Virtualization: Supported and certified by virtualization software vendor: Microsoft Hyper-V 2019, VMware ESXi 6.7 |
| - | Warranty: 36 months  |
| **Lot 2** |
| **1** | **Notebook/ 18 pcs.**  |
| - | CPU: 2-cores Processor similar to Intel core i3, 2.3 GHz |
| - | RAM: 8 Gb SO DIMM DDR4 (with upgrade possibility up to 16GB) |
| - | Number of RAM slots: minimum 2 |
| - | Storage: SSD 128 GB or HDD 1000 GB 5400rpm + 8Gb NAND Cache |
| - | Display: LED, Mat, 15.6" IPS Full HD (1920x1080), Integrated Web Camera  |
| - | Colors: Black or Gray  |
| - | Ports: HDMI, RJ-45, Audio jack 3.5mm, 2xUSB 3.0, 1xUSB 2.0, Card Reader, DVD +/-RW |
| - | Wireless: 802.11b/g/n, Bluetooth |
| - | 3-cell Li-Ion Battery |
| - | Connection: Schuko CEE 7/7P  |
| - | Warranty: 24 months |
| **2** | **Monitors/ 25 pcs.**  |
| - | Type: 23.8 or 24 inch IPS |
| - | Resolution: 1920 x 180  |
| - | Dynamic contrast: 10000000:1 |
| - | Connection: Schuko CEE 7/7P  |
| - | Warranty: 24 months |
| **Lot 3** |
| **1** | **LCD interactive system (Smart Board)/ 1 set**  |
| - | **Display panel:** |
| - | Dimension: min. 75”  |
| - | Resolution: Full-HD (1,920 x 1,080-pixel) |
| - | Response Time: max. 8 ms (grey to grey) |
| - | Backlight: LED |
| - | Max. Brightness: 350 cd/m2 |
| - | Contrast Ratio: 1200: 1 |
| - | Viewing Angle (H/V): 178°/178°  |
| - | Touchscreen technology: IR  |
| - | Multi Touch: 10 points |
| - | Protection glass: available |
| - | **Networking:** |
| - | Ethernet LAN: 10/100/1000 Mbps |
| - | Wireless LAN: IEEE 802.11 a/b/g/n/ac |
| - | **Connectivity (input):**  |
| - | Video: Analogue RGB, HDMI  |
| - | Mini D-sub 15-pin x 1 |
| - | HDMI x 3 (PC / AV signal compatible) |
| - | 3.5 mm-diameter mini stereo jack x 1 |
| - | RS-232C D-sub 9-pin x 1 |
| - | USB 2.0 (type A) x 2, USB 3.0 (type A) x 2  |
| - | **Connectivity (output):** |
| - | 3.5 mm-diameter mini stereo jack x 1 |
| - | 1xPortUSB (Type B) |
| - | **Expansion:** |
| - | Expansion Slot: available |
| - | **Sound:** |
| - | Speaker Output: 10 W + 10 W |
| - | **Mount:** |
| - | VESA compatible |
| - | **Power:** |
| - | Power Supply: 100 V – 240 V AC, 50/60 Hz |
| - | **Accessories:**  |
| - | AC power cord |
| - | Remote control unit with battery  |
| - | Set-up manual |
| - | USB cable |
| - | Pen tray |
| - | Touch pen |
| - | Camera mount |
| - | **System:**  |
| - | Memory: 1GB |
| - | Internal storage: 8GB |
| - | **Additional functionality required:** |
| - | interactive functionality between HOST and mobile devices connected via wireless LAN to enable sharing of onscreen content, the transferring of files, interactive onscreen writing, drawing and remote controllability of the HOST from mobile devices |
| - | **Expandability:** |
| - | MFP Connectivity |
| - | Webcam mount |
| - | Built-in speaker |
| - | **File formats:**  |
| - | Microsoft Office (Excel®, Word, PowerPoint) |
| - | PDF, JPEG/PNG/BMP/TIFF |
| - | WMV/AVI/MP4/FLV |
| - | **OS support:** |
| - | Windows 7, Windows 8.1, Windows 10, Mac OS, Android, iOS |
| - | **Flat Panel Floor stand:** |
| - | Designed for displays, with 4 swivel wheels which provide easy maneuverability over various flooring surfaces and through doorways |
| - | Warranty: 24 months |
| **2** | **Projector screen/ 5 pcs.**  |
| - | Projector screen with tripod: 200x200cm  |
| - | Height Adjustable |
| - | 180-degree wide viewing angle  |
| - | Active 3D, 4K Ultra HD, and HDR ready |
| - | Warranty: minimum 24 months |
| **Lot 4** |
| **1** | **Un-interruptible Power Supply UPS/ 4 pcs.**  |
| - | Capacity: minimum 3000VA |
| - | **Entrance power range:** |
| - | Low voltage: 110 - 160VAC ± 5% in function of charge level |
| - | High voltage: 300VAC ± 5% |
| - | Frequency range: 40 Hz-70Hz |
| - | Outputs: Out nominal voltage: 220 ± 10% VAC |
| - | **Connections:** |
| - | Socket IEC C13: 8 |
| - | Socket IEC C19: 1 |
| - | Connection: 6xSchuko CEE 7/7P |
| - | USB Port, RS-232 Port, EPO Port, Protection RJ45 and RJ11 - optional |
| - | Power cable length: ≥ 1.80 meters |
| - | Warranty: minimum 24 months |
| **2** | **Un-interruptible Power Supply UPS/ 6 pcs.** |
| - | Output power capacity: minimum 1500 VA |
| - | Nominal entrance/output voltage: 230V |
| - | Entrance frequency: 50Hz |
| - | Connection: 6xSchuko CEE 7/7P |
| - | Power cable length: minimum 1.80 meters |
| - | Warranty: minimum 24 months |
| **3** | **Voltage stabilizer/ 4 pcs.**  |
| - | Stabilizer type: relay |
| - | Maximum output power: at least 10000VA |
| - | Maximum load, W: ≤ 7000 |
| - | Input voltage: ~ 140 - 275 ± 3% |
| - | Output voltage: ~ 230 (-14 / + 10%) |
| - | Operating frequency: 50 Hz |
| - | Protection: overvoltage / undervoltage, high voltage pulses, short circuit and overload, built-in thermal protection of the autotransformer |
| - | Indicators: at least two outputs of voltage, power, stabilization, input protection operation |
| - | Warranty: minimum 24 months |
| **Lot 5** |
| **1** | **Switch I / 10 pcs.** |
| - | 8-Port Gigabit Desktop PoE Switch, 8 Gigabit RJ45 ports including at least 4 PoE ports, 53W PoE, steel case |
| - | Warranty: minimum 24 months |
| **2** | **Switch II / 8 pcs.** |
| - | PoE Switch 180W:24x10/100Mbps RJ45 ports, 4xGigabit RJ45 Ports and 2xCombo SFP Slots. 802.3at/af, Tag-based VLAN, STP/RSTP/MSTP, IGMP V1/V2/V3 Snooping, 802.1P QoS, Rate Limiting, Port Trunking, Port Mirroring, SNMP, RMON1U 19-inch rack-mountable steel case |
| - | Warranty: minimum 24 months |
| **3** | **Modem SHDSL/ 8 pcs.** |
| - | **SHDSL Interface:** |
| - | 2-wire twisted pair |
| - | **Standards:** |
| - | ITU-T G.991-2, ETSI 101 524 |
| - | **Data Rate:** |
| - | 2 wire: from 64 Kbps to 2.3 Mbps |
| - | **Terminal Interface:** |
| - | G.703, G.704 - E1, T1 |
| - | RS-530, X21, V35, V24/V28 |
| - | LAN Interface: 10/100 Mbps, RJ45x4, RJ11x1 |
| - | Management and Security |
| - | Support Telnet, SNMP, DHCP, Diagnostic Tools |
| - | Administration through Telnet, SNMP or WEB GUI  |
| - | Support for VPN tunnels |
| - | Security: NAT Firewall, MAC /IP /URL Filtering |
| - | Warranty: minimum 24 months |
| **Lot 6** |
| **1** | **HP/ CANON Multifunctional Laser Printer A4/ 30 sets (including 1 additional toner cartridge per set)**  |
| - | Media size: A4, A5, B5 |
| - | Copying/printing speed: min. 20 ppm |
| - | Print resolution: min. 600 x 600 dpi |
| - | Memory: 128 MB |
| - | Connectivity: USB port, Ethernet 10/100/1000 |
| - | Input tray: minim 250 pages |
| - | Paper output capacity standard: min. 100 sheets |
| - | ADF capacity – min. 50 sheets |
| - | Scanner resolution: min. 300 x 300 dpi |
| - | Zoom: 25 - 400% |
| - | Compatibility with operation systems: Drivers for Windows XP. XP x64, Vista, Vista x64, Windows 7, Windows 8, Windows 10, Server 2008/2012, Linux, Unix |
| - | Toner delivered with equipment: Additionally, 1 original toner cartridge as reserve besides the one delivered with the equipment |
| - | toner capacity: minim 500 pages |
| - | Maximum monthly cycle: min. 1 000 pages |
| - | Warranty: minimum 24 months |
| **2** | **HP/ CANON Multifunctional Laser black and white Printer A3/ 8 sets (including 1 additional toner cartridge)** |
| - | Printing speed, A4 format: min 20 ppm |
| - | Print resolution: 600 x 600 dpi |
| - | Memory: Minim 256 MB |
| - | Maximum monthly cycle: min 10000 pages |
| - | Paper supply: 500 sheets |
| - | Duplex automat: Integrated |
| - | Media size: A3, A4, A5, B5 |
| - | Connectivity: Port Gigabit Ethernet 10/100/1000, USB 2.0 |
| - | Compatibility of operation systems: Drivers for Windows, XP. XP x64, Vista, Vista x64, Windows 7, Windows 8, Windows 10, Server 2008/2012, Linux, Unix |
| - | **Copier:** |
| - | Copying speed: A3, A4 format: min 20 ppm |
| - | Zoom: 25 - 400% |
| - | **Scanner:** |
| - | Resolution: min. 300 x 300 dpi |
| - | Scanner type: scanner duplex, scan preview function |
| - | Scanning in formats: PDF, JPEG, TIFF, Secure PDF, XPS |
| - | Network facilities: USB port scanning,  |
| - | Toner delivered with equipment: Additionally, 1 original toner cartridge as reserve besides the one delivered with the equipment |
| - | Warranty: minimum 24 months |
| **Lot 7** |
| **1** | **EPSON color Inkjet A4 Printer MF (incorporated by manufacturer ink tank system)/ 6 pcs.** |
| - | Printer features, scanner, copier |
| - | Print type: Inkjet (color) |
| - | Number of cartridges: 4 |
| - | Maximum print sizes: A4 and photo  |
| - | Scanner resolution: minimum, dpi 1200x1200 |
| - | Print resolution: |
| - | Color and black&white print resolution 4800 x 1200 dpi |
| - | Black and white print speed: minimum color, 20 |
| -  | Paper input minimum sheets: 150 |
| - | USB 2.0, RJ 45 (network) |
|   | Warranty: minimum 24 months |
| **2** | **EPSON Inkjet A3 Printer MF (incorporated ink tank system by the manufacturer)/5 pcs.** |
| - | Printer features, scanner, copier |
| - | Print type: Inkjet (color)  |
| - | Number of cartridges: 4 |
| - | Maximum print size: A3 and photo (9 \* 13, 10 \* 15, 13 \* 18, 13 \* 20,) |
| - | Scanner resolution: minimum dpi 1200x4800 |
| - | Color and black&white print resolution 4800 x 1200 dpi |
|   | Black and white print speed: minimum color, 20 |
| - | Paper input, minimum sheets: 250 |
| - | Paper output, minimum sheets: 50 |
| - | USB 2.0, RJ 45 (network) |
| - | Warranty: minimum 24 months |
| **Lot 8** |
| **1** | **„Colour plotter 60’’ thermal inkjet printing technology”/ 1 pc.**  |
| - | **Sheet format:**  |
| - | Minimum ISO standards A4, A3, A2, A1, A0, width – minimum 1500mm (optional for other standards) |
| - | Roll printing minimum ISO A0, A1, A2, ANSI 24", 36", 42",60" (optional for other standards) |
| - | **Size of printing media:** |
| - | Width: minimum 1500mm (60") |
| - | Grammage: up to 460g/m2 |
| - | Thickness: up to 0.6mm |
| - | **Printing technology:**  |
| - | Thermal inkjet or similar |
| - | **Print resolution:**  |
| - | Minimum 3 print resolutions (ex: best, normal, draft) |
| - | Best (color, black & wtihe): minimum 2400 x 1200 dpi |
| - | Minimum line width: 0,007mm |
| - | Line precision: +/-0.1% |
| - | **Handling:** |
| - | Roll feed |
| - | Take-up reel |
| - | Automatic horizontal cutter |
| - | Printing margins: up x down x left x right: maximum 5 x 5 x 5 x 5 mm |
| - | **Supported languages/programs for printing:** |
| - | CALS G4, Adobe PostScript 3, Adobe PDF minimum version 1.7, TIFF, JPEG without any additional buying |
| - | Drivers included: CALS G4, Adobe PostScript 3, Adobe PDF – minimum Windows 7, Windows 8.1, Windows 10, Windows Server 2008 R2 or upper versions which will be configured downgrade for this OS |
| - | Possibility of using the solutions RIP (Raster Image Processors) ex: Caldera, ColorGATE, EFI, Onyx, Sai |
| - | Possibility to send print directly from specified Windows applications or RIP programs |
| - | Printing speed: Maximum 140m2/h (printed in quick mode on plain inkjet white bright media) |
| - | **Ink:** |
| - | Minimum 8 installed ink cartridges |
| - | Volume of ink cartridges: minimum 700ml |
| - | Additional original ink tank (reservoir) to ensure printing continuity upon completion of the main cartridge i.e. *on-the-fly ink cartridge* |
| - | **Print media supported:**  |
| - | Plain and treated paper |
| - | Technical paper |
| - | Film, photo paper |
| - | Translucent support |
| - | Auto-adhesive |
| - | Banner and ads |
| - | Textile |
| - | **Print color control technology:** |
| - | Emulation technology with sensors for the control of the printed colors according to the minimum print media for the paper and the color of the cartridges |
| - | **Miscellaneous (other) performances:** |
| - | Accuracy and control of paper rolling by automated technology and sensors for adjusting them |
| - | Optical detection of misalignment of print heads and possible printing errors |
| - | **Memory:** |
| - | Minimum RAM: 8 GB |
| - | Minimum HDD: 500 GB |
| - | **Connectivity:** |
| - | Gigabit Ethernet (1000 Base-T/TX) |
| - | USB 2.0 |
| - | In case of ports for wireless connection there must be an option to allow them to be disconnected/ inhibited |
| - | **Supplier should deliver the following means for network connection:** |
| - | USB cable: minimum length of 3 m |
| - | UTP cat5e patch-cord: minimum length of 5 m |
| - | **Compatibility:**  |
| - | The product must be compatible with at least the following operating systems: Windows 7, Windows 8/8.1, Windows 10, MAC (OS9, OS10)1, optional Linux, Windows Server 2008 R2 or other upper versions which will be downgrade configurable with this OS. Drivers must be supplied for these systems |
| - | **Power:** |
| - | Input voltage (auto ranging): 220 - 240 V (±10%), 3 A;  |
| - | Weight: maximum 250 kg with accessories |
| - | **Included accessories:** |
| - | Spindle |
| - | Printheads - 8 (cyan, magenta, yellow, matte black, photo black, chromatic red, light gray, light magenta) |
| - | Two complete sets of ink cartridges (each cartridge set will include 8 colors: *magenta, yellow, matte black, photo black, chromatic red, cyan or light cyan, light gray, light magenta*) |
| - | User maintenance kit |
| - | Take-up reel |
| - | Kit for 3-inch spindle (optional) |
| - | Power cord |
| - | Reference guide |
| - | **Security features:** |
| - | SNMPv3, Control Panel lock levels, Certificates management, IPsec, SSL, Secure file erase, Secure disk erase |
| - | Warranty: minimum 24 months **(on-site warranty)** |
| - | **Certificates and other documents:**  |
| - | Certificate of quality (at delivery stage) |
| - | Certificate of conformity from the manufacturer |
| - | Drivers availability |
| - | **Other requirements:**  |
| - | Granting of the products' warranties must not be conditioned by the application of additional sealing elements of the supplying company |
| - | All the costs related to the ensuring of the warranty of the supplied products are covered by the contractor during the warranty period applying the conditions of these specifications |
| - | In case of the equipment hardware failure during the warranty period, the supplier (without additional costs for the beneficiary) must repair or replace them within 48 hours from the reported time. In the event that an equipment is replaced, it will benefit from a warranty period similar to the offered product. The replacement will be done only with new components according to the configuration in the documentation |
| - | NB: The equipment will be tested upon delivery  |
| **Lot 9** |
| **1** | **Desktop computers/ 25 identical sets with identical components** |
| - |  **CPU:** |
| - | 2-cores Processor similar to Intel Pentium |
| - | Main frequency: 3.70 GHz |
| - | Cache: 4MB |
| - | **Mainboard:** |
| ~~-~~ | ~~Official component supplied and installed by the manufacturer of desktop computers~~ |
| - | Chipset: similar to Intel H310 |
| **-** | **Memory:** |
| - | Capacity: 8GB (with upgrade possibility up to 16GB) |
| - | Type: DDR4 or more performant  |
| - | **HDD:** |
| - | Capacity: 500GB |
| - | RPM: 7200 |
| - | SATA III interface |
| - | **LAN:**  |
| - | 10/100/1000 Mb/s |
| - | RJ 45 connector |
| - | **Graphics card:** |
| - | integrated, Shared Memory is acceptable |
| - | **Audio card:** |
| - | internal or external |
| - | **Extension slots:** |
| - | 1 x PCI-e x 16 |
| - | 1 x mini PCI-e |
| - | **Back panel ports:** |
| - | 2 x USB 2.0 |
| - | 2 x USB 3.0 |
| - | 2 x USB 3.1 |
| - | 1 x HDMI or DP |
| - | 1 x VGA(D-Sub) |
| - | 1 x RJ 45 LAN |
| - | 1 x 8 Channel Audio in |
| - | **Power:** |
| - | Minimum: 550W  |
| **-** | **Accessories:** |
| - | USB optical mouse, same brand as ~~desktop computer~~ USB Keyboard |
| - | USB Keyboard: same brand ~~as desktop computer~~ USB optical mouse |
| - | **Form Factor:**  |
| - | Full Tower, Middle Tower or Mini Tower |
| - | **Connection:**  |
| - | Schuko CEE 7/7P |
| - | Warranty: 24 months |