# *ANNEX IV*: Budget breakdown (Model financial offer)

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**PUBLICATION REFERENCE: CB006.2.12.039-SUP-PP2**

**CONTRACT TITLE:: Supply for Automatic Observatory Tower (AOT)**

**NAME OF TENDERER:<**name**>**

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| **A** | |  | | **C** | | **D** | | **E** | |
| **Itemnumber** | | **Quantity** | | **specifications offered (incl brand/model)** | | **UNIT COSTS WITH DELIVERY DDP**  **PLACE OF ACCEPTANCE – MUNICIPALITY OF MAKEDONSKA KAMENICA**  **IN EUR, VAT EXCLUDED** | | **total**  **EUR**  **VAT EXCLUDED** | |
| I | | **TECHNOLOGICAL EQUIPMENT AND SOFTWARE TOWER** | | | | | | | |
| **1** | | 1 | | **Delivery and installation of a thermo-optical bispectral camera (for outdoor use, with automatic rotation of 360 for fire detection)** Fire Detection: min. 8 km for the object with 2mx2m Vehicle detection: min. 13.5km for the object with 1.4mx4m Human detection: min. 4.4km for the object with 1.8mx0.5m Menu: English Wiper: Yes Power: 48 VDC/5 A, 220W Work Temperature/Humidity: From -40°C to 60°C (-40°F to 140°F); Humidity: 90% or Less Protection Level: IP66 Standard; TVS6000V Lightning Protection, Surge Protection and Voltage Transient Protection Weight Approx.: 60kg Thermal module Image sensor: Vanadium Oxide Uncooled Focal Plane Arrays Max. Resolution: 640 x 512 Detector Pitch: 17 Response waveband: 8pm to 14pm NETD < 40mk(@25C,F#=1.0) Lens (focal length): 30 mm to 150 mm MRAD: 0.57 to 0.11 mrad Field of View: WIDE 20.56\* x 16.S1\*; TELE 4.15\* x 3.32\* Min. Focusing Distance: 2 m F number: 1.2 Optical camera Image 5ensor: 1/1.8” ProgresslveScanCMOS Min. Illumination:Color 0.005 Lux @ (F3.5,AGC ON): B/W 0,0005 Lux @ (F3.5 ) | |  | |  | |
| **2** | | 1 | | **Delivery and installation of Camera for surveillance overview** High-performance HD outdoor PTZ dome camera with integrated IR illumination for scenes with low or no ambient lighting; Long distance illumination up to 175 m ; Lens - 30x zoom 4.5 mm - 135 mm (F1.6 - F4.4); Video performance Color - 0.05 lx; Mono - 0.01 lx; With IR - 0 lx; Number of LEDs - 4; Wavelength - 850 nm; Video compression - H.265 H.264 M-JPEG; Streaming - Four (4) streams: Two (2) configurable streams in H.264 or H.265; One (1) I-frames-only stream based on first stream; One (1) M-JPEG Stream; Resolution - 1080p ,720p, D1 4:3 (cropped), SD (432p, 288p); Pan Range - 360° continuous; | |  | |  | |
| **3** | | 1 | | **Delivery and installation (at elevation 28 m) of weather station for measuring current meteorological data. 1 piace The station should measure:** - Temperature, - Humidity - Wind speed - Wind direction - Air pressure and rainfall.  Weather station provides six of the most important weatherparameters: air pressure, temperature, humidity, rainfall, wind speed and direction throughvariouscombinations. Transmitterwith the neededparameter(s) intoweather application isselectable, with a large variety of digital communication modes and wide range of voltages. A heated option isavailable. Low power consumptionenablessolar panel applications. Solid state sensortechnology. Ultrasonicwindsensors for measureingwind, are applied to determine horizontal wind speed and direction. Barometric pressure, temperature, and humiditymeasurements are combined in the PTU module using capacitive measurement for eachparameter. This module iseasy to change withoutany contact with the sensors. The precipitationmeasurementisbased on the unique acousticSensorwithoutflooding, clogging, wetting, and evaporationlosses. | |  | |  | |
| **4** | | 1 | | **Delivery and installation of switch 8 ports** Network switch with eight gigabit ethernet ports and four SFP ports. Configured, with all ports switched together. Compatible with 1.25G SFP modules. Capable of powering other devices through PoE. Powering: Two direct-input power jacks (5.5 mm outside and 2 mm inside, female, pin positive plug). One DC input supports 48-57 V DC, the other supports 18-28 V DC. Posibilities to use either one, or both inputs at the same time. The power consumption of this device itself under maximum load to be up to 12 W. PoE output This device should supply PoE powering to external devices from its ethernet ports. The output voltage to be selected automatically, depending on what kind of adapter is connected, and what kind of voltage the connected device requires. The device should power 802.3af/at devices. With the included 28 V PSU the max power output of each ethernet port in this mode to be 1 A, total maximum for all ports is 2.8 A. At 802.3af/at high power mode the max power output is 450 mA per port, total max 1.4 | |  | |  | |
| **5** | | 1 | | **Delivery and installation of set of antenna and module for radio connection** Operating Frequency - 5170 - 5875 MHz; Gain - 25 dBi; Dish Reflector - 400 mm; Networking Interface - (1) 10/100/1000 Ethernet Port; Wireless Approvals - FCC, IC, CE; RoHS Compliance - Yes | |  | |  | |
| **II** | | **COMMUNICATION CABINET** | | | | | | | |
| **6** | | 1 | | **Delivery and installation of communication cabinet 27U 600x800 standing** FLOOR-STANDING CABINET 19"; Height U: 27U; External depth: 800 mm; Total width: 600 mm; | |  | |  | |
| **7** | | 1 | | **Delivery and installation of fan block 4х, with thermostat** 4 fans with thermostat, 230v/60w, for on top or bottom installation of the cabinet | |  | |  | |
| **8** | | 1 | | **"Delivery and installation of panel 19“ 3U fuse box**  19 ""protection strip 3 U with cover, with DIN rail, for 22 module | |  | |  | |
| **9** | | 1 | | **Delivery and installation of panel 19" 1U C5e FTP 16XRJ45, charged** 24 port cat.5e patch panel, shielded, krone type, ral 9005 | |  | |  | |
| **10** | | 2 | | **Delivery and installation of panel 19" 1U arranged, 5 brackets** 1u 19' cable management panel, 5 plastic management rings, horizontal, made of steel | |  | |  | |
| **11** | | 3 | | **Delivery and installation of shelf 19"** 1U 300, 30 kg 19' shelf with perforation, depth 300mm. max. loading capacity (kg): 30, 1U | |  | |  | |
| **12** | | 2 | | **Delivery and installation of power delivery unit 8x Schuko 19” 1U, with switch** power distribution panel, 8 sockets, 19' 1U, 2m long cable, with master switch | |  | |  | |
| **13** | | 1 | | **Delivery and installation of Grounding kit** Earthing kit - ground conductors preassembled with connectors, and have been cut to the correct length. | |  | |  | |
| **14** | | 1 | | **Delivery and installation of levelling feet set 4 pcs** Leveling Legs for Server Racks - Metal - Hardened Steel; Type – Adjustable | |  | |  | |
| **15** | | 1 | | **Delivery and installation of switch 16 ports** Fully manageable L3 switch, full wire speed switching, 1U rackmount enclosure Ethernet, Fiber, or 4G (with optional USB modem) gateway connection to Internet  • RouterOS gateway/firewall/VPN router with passive cooling  • up to seventeen gigabit switch ports (1xSFP and 16xRJ45) | |  | |  | |
| **16** | | 1 | | Configuration and settings of a site | |  | |  | |
| **III** | | **RADIO ANTENNA FOR RECEPTION/TRANSMISSION** | | | | | | | |
| **17** | | **1** | | **Delivery and installation of set antenna and module for radio connection** Operating Frequency - 5170 - 5875 MHz; Gain - 25 dBi; Dish Reflector - 400 mm; Networking Interface - (1) 10/100/1000 Ethernet Port; Wireless Approvals - FCC, IC, CE; RoHS Compliance – Yes | |  | |  | |
| **18** | | **30 m** | | **Delivery and pulling out of communication cable FTP cat.5e from communications cabinet to the radio antenna** | |  | |  | |
| **19** | | **30 m** | | **Delivery and laying of PVC cable duct 20х20** Cat. 5e cables for local networks Performance 100 MHz Cable with 4 twisted pairs, 100 Ω LSZH sheath: zero halogen Grey RAL 7035 ANSI/TIA colour code Compliant with ISO/IEC 11 801, EN 50173, ANSI/TIA 568 standards Products conforming to the new CPR regulations Euroclass Dca for LSZH cables, Euroclass Eca for PVC cables | |  | |  | |
| **20** | | **5 m** | | **Delivery and installation of current collector**  current collector made of steel galvanized splint 40/4 mm on the roof of the Community building to connect with the existing lightning protection installation. | |  | |  | |
| **21** | | **1** | | **Delivery and installation of UPS 3000VA** Power Rating - 3kVA/ 2700W; Cold start - YES, default frequency=50Hz or settable; Acceptable Input Voltage - 110VAC~288VAC; Phase - Single phase in, single phase out; BATTERY Rating/Type - 12VDC/7Ah; Quantity - 8;  Type - ON Line; Formfactor - Tower; | |  | |  | |
| **IV** | | **TECHNOLOGICAL EQUIPMENT AND SOFTWARE** | | | | | | | |
| **22** | | **2** | | **Delivery and installation of workstation (Desktop PC)** Intel® Core™ i7 or equivalent, Processor (2,20GHz, 3.70GHzw/turbo, 9Mb Cache, 6 Cores) 8 GB DDR4-2666 SDRAM, 1 TB 7200 rpm SATA HDD, 256 Gb SSD M.2 PCIe NVMe Solid Stare Drive DVD/RW Intel® UHD Graphics 630 Windows 10 Professional 64-Bit, factory installed Integrated Intel UHD 630 Graphics Integrated Realtek R718111HSD-CG Ethernet LAN 10/100/1000 Card Integrated Qualcomm QCA9377 Dual Band 802.11ac with MU-MIMO+Bluetooth 4.1 Card 3 Years RTD Standard Warranty | |  | |  | |
| **23** | | **1** | | **Delivery and installation of software GPRS/IP monitoring receiver**  Desktop application that emulates GPRS / IP monitoring receiver, with unlimited accounts. Converts the incoming IP signal from communication devices for alarm systems. Received events are converted and stored by the application in CID format before being sent to the output port in the selected reporting format. Input selection (IP port and GSM / GPRS modem) and COM output port Buffers and manages incoming events Registers, visualizes and manages IP and GPRS devices without requiring changes to the control panels Supports SMS registration and reporting via GSM / GPRS modem Monitors the connection with GSM / GPRS modem and reports to the monitoring center in case of network failure Automatic loading of the application with the start of the computer's operating system | |  | |  | |
| **24** | | **1** | | **Delivery and installation of monitor - 42"** Screen size: 42.51 inches Panel type: LCD Panel Native resolution: 3840 x 2160 Typical maximum brightness: 300 cd/m² Colour support: 1.07 billion Response time: 5ms Refresh rate: 60Hz Contrast ratio: 1200:1 (50m:1 Dynamic Contrast) Viewing angle: 178º horizontal, 178º vertical Power consumption: 63.1W typical | |  | |  | |
| **25** | | **1** | | **Delivery and installation of monitor - 21.5"** Type - 21.5-inch with LED backlight; Resolution - 1920 x 1080 at 60 Hz; Aspect ratio - 16:9; Viewing angle - Up to 178° horizontal Up to 178° vertical; Brightness - 250 cd/m2; Color suppor - Up to 16.7 million colors; | |  | |  | |
| **26** | | **1** | | **Delivery and commissioning of software for early detection of fires in the Control Center** The software is based on geographic data, through thermal detection of hot spots. Provide the ability for user control. Support a database with all the information from detected fire alarms, event time data and users. Allows automatic and manual movement of scanning complex. Acoustic and visual alarm in case of fire. Alarm information:, distance from the observation station to the fire. Precise location of the alarm on high resolution photos; Connect the alarm to a high resolution photo. Graphical representation of the observation area on the map. Access data from the weather station integrated in the application. | |  | |  | |
| **27** | | **1** | | **Setting and testing of the system for early detection of fires** Commissionning of the system, testing of all funcionalities | |  | |  | |
| **28** | | **1** | | **Training of operators to work with the software for early detection of fires** Training for the personnel who will be operating the system, introduction for all functionalities, user options, management of admin account, creation of additional users, management of alarms | | **[**Lump sum**]** | |  | |
| **Total, in EUR, VAT excluded** | | | | | | | |  | |