



ADA

ADVANCED DATA
ANALYTICS IN BUSINESS

Co-funded by the
Erasmus+ Programme
of the European Union



Report on the Purchase of Equipment

28/02/2020

contacts:

Prof. Dr. Mirko Savić, University of Novi Sad, savicmirko@ef.uns.ac.rs
Prof. Dr Vladan Devedžić, University of Belgrade, devedzic@gmail.com
Prof. Dr Jelena Stanković, University of Nis,
jelena.stankovic@eknfak.ni.ac.rs



Project acronym:	ADA
Project full title:	Advanced Data Analytics in Business
Project No:	598829-EPP-1-2018-1-RS-EPPKA2-CBHE-JP
Funding scheme:	ERASMUS+
Project start date:	November 15, 2018
Project duration:	36 months

Abstract	This is the report about the first round of equipment purchase on the ADA project, after the first public purchase and installation of equipment in February 2020.
----------	--

Title of document:	Report on the Purchase of Equipment 28/02/2020
Work package:	WP 2: Preparations for implementation of new master program
Activity:	2.1 Equipment purchase
Last version date:	28/02/2020
File name:	2.1.1 Report on the Purchase of Equipment
Number of pages:	7
Dissemination level:	Consortium

VERSIONING AND CONTRIBUTION HISTORY

Version	Date	Revision description	Partner responsible
V 1.0	28/02/2020	First version	UNS

DISCLAIMER

The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Overview of the purchase of equipment

Procedure for the purchase of equipment and public call started in April 2019. University of Novi Sad led the JOINT public procurement for all four universities. Serbian law defines the time frame for the tendering procedure so that the bids are submitted within 30 days of publication of invitation and the contract may be concluded at the earliest 10 days after the bid opening and consequent contract award declaration. The list of equipment for the first round of purchase is in the Annex 1 of this report.

Because of the changes of prices on the market, and also because of our conservative assessment of market prices, every partner has saved certain amount regarding the budget for equipment in EUR: UNS - 8,685; UB - 6,442; UNI - 3,186; UNIKG - 3,167; Total - 21,479. Since University of Novi Sad will expand the study program to last two years with 120 ECTS points (instead of previously 18 months and 90 ECTS), we got the approval from our project officer in EACEA to use the saved money to buy additional equipment in order to support the increased number of courses and work on the study program. Additional reason, which holds for all partners in the consortium, is that we have realized that additional equipment will be more than useful in order to conduct LLL courses in more efficient way. University of Belgrade will use the opportunity to replace some old equipment planned also for ADA study program: " The computer equipment used currently in UB labs for teaching is already years old and it happens that students have trouble using it when it comes to accessing online material. Time after time, computers that students use during classes simply block and need to be restarted. This can be especially critical in courses to be given as part of the new ADA study program, since several courses will be working with large datasets.". The second JOINT public purchase led by UNS will be announced in April 2019 and finished before the start of the new school year. The list of equipment for the second round of purchase is in the Annex 3 of this report.

The recapitulation of first public purchase is the following:

University of Novi Sad: UNS signed the contract with vendors on August 2019. The value of the contract was approximately 45,315 EUR. All equipment was delivered and installed at UNS until February 2020. One entire classroom at the Faculty of Economics was equipped with All-in-one computers, software, and accompanying equipment for teaching the business analytics on ADA master. Laptops and printers are distributed to teachers for the preparation of teaching materials for the study program. When it comes to the equipment, everything is ready for the start of ADA master in October 2020.

UB signed the contract with the vendor on September 30, 2019. The value of the contract was 47.558,24 EUR. The equipment has not been delivered, nor installed at UB yet, as of March 2020, due to procedural reasons. There have been administrative delays in the process of

signing the contract (30.9.2019.), then UB had to wait for the supplier to assemble all the equipment (3 months' deadline), but in the meantime the supply channels from China got disturbed due to Corona epidemic (then in China only) so it was necessary to wait for a few items that were not available at the time. During this process, the global pandemic lockdown started, and UB is still waiting for the equipment supply channels to recover.

At the University of Niš, so far, a number of preparatory activities have been carried out related to the accreditation of the master program ADA in Business. All the syllabi are prepared, as well as the technical materials (both in Serbian and English) according to requirements of National Accreditation Body. The workload of the planned teachers was checked and it was determined that there would be no problem for their engagement. The next step is to submit the materials for the approval of the Senate of UNI. At this moment, all the activities at the UNI are postponed during the Covid19 pandemic crisis. The materials will be submitted to National Accreditation Body, as soon as the approval of Senate of UNI is obtained. Due to recent development of situation with Covid-19 virus, it is not possible to assess when it will be possible to complete the remaining activities related to the accreditation of the master course ADA in Business, and that the planned first generation enrolment is likely to be delayed.

University of Kragujevac: UNIKG signed the contract with vendors in September 2019. The value of the contract was approximately 26,728 EUR. Unfortunately, due to Corona virus pandemic which has affected supply chains from China, vendor has officially notified authorities of UNIKG that it is not able to deliver purchased equipment in time defined by contract. We hope that delivery of purchased equipment will be realized as soon as possible.

Second purchase of the equipment is at the moment on hold, because of the recent Covid-19 pandemic, and we hope that right after the end of this pandemic, we will finish the second public call and install all equipment in our classrooms.

ANNEX 1 Specification of the equipment (First round)

Partner	Nature, type	Amount Excl. VAT
UNS	Server Equivalent to Server HP DL360 Gen9 E5-2630v3 (Xeon 8 core, 16GB)	3,500.00
UNS	Rack hard Drive Equivalent to HPE 1TB SATA 6G Midline 7.2K SFF	1,000.00
UNS	Server Rack Equivalent to HPE 14U Advanced Shock Rack	1,000.00
UNS	Rackmount Keyboard and Monitor Equivalent to HP TFT7600	500.00
UNS	All-in-One workstation with OS Equivalent to HP 24-e005ny 8GB 256GB SSD x 20 pcs	17,000.00
UNS	Switch Equivalent to Cisco SG250-26P-K9, 26-Port 10/100/1000 Smart PoE x 1 pc	1,000.00
UNS	UPS Equivalent to PowerWalker 3000VA/2700W	1,000.00
UNS	Laptop Equivalent to HP EliteBook 840 G4 x 10 pcs	15,000.00

UNS	Laptop Equivalent Lenovo IdeaPad Yoga 730-13IKB 81CT0059YA x 1 pcs	1,650.00
UNS	Laptop Equivalent MICROSOFT SURFACE PRO 6 x 4 pcs	5,000.00
UNS	Secondary power supply Micro ATX/Mini ITX x 10 pcs	200.00
UNS	Monitor 27" DELL LED P2719HC 27", IPS, 1920 x 1080 Full HD x 1 pc	300.00
UNS	Memory modules DDR4 SDRAM x 10 pcs	650.00
UNS	Memory modules DDR3 SDRAM x 25 pcs	750.00
UNS	SAMSUNG SSD 512GB, 2.5", SATA III, 860 Pro Series x 32 pcs	5,450.00
UB	Laptop Equivalent to Lenovo Think 81AX00EEYA/8GB/256GB x 34 pcs	23,000.00
UB	Projector x 1 pcs	1,500.00
UB	Projector sheet VEGA EL S 180 x 1 pcs	300.00
UB	Switch Equivalent to Cisco SG250-26P-K9, 26-Port 10/100/1000 Smart PoE x 2 pcs	600.00
UB	Rackmount Keyboard and Monitor Equivalent to HPTFT7600 x 1 pcs	800.00
UB	Laptop Equivalent to Asus ZenBook UX461 x 1 pcs	1,300.00
UB	Laptop Equivalent to MacBook Pro 2018 13, MR9R2ZE/A x 2 pcs	4,500.00
UB	Laptop Equivalent to Laptop Asus ROG GL703GM-EE032 x 1 pcs	1,400.00
UB	Desktop i9-9900X/RTX 2080Ti/64GB/SSD1TB/HDD4TB x 1 pcs	3,200.00
UB	Input device Magic Keyboard x 1 pcs	100.00
UB	Laptop equivalent to Laptop HP Omen - 15-dc0007nm - 4RM13EA x 1 pcs	1,600.00
UB	UPS Equivalent to APC UPS BX1400UI 1400VA / 700W x 3 pcs	500.00
UB	Monitor Equivalent to Hewlett Packard Pavilion 32 V1M69AA x 2 pcs	800.00
UB	Laptop Equivalent to MacBook Air 13 Retina MRE92ZE/A x 3 pcs	4,800.00
UB	Laptop Equivalent to HP Omen dc0006nm x 1 pcs	1,400.00
UB	Laptop Equivalent to Asus ZenBook UX433FN-A5022R x 1 pcs	1,600.00
UB	Desktop Desktop Intel Core i7-8700K/16GB/ SSD250GB/ HDD 1TB / Nvidia RTX 2070 x 1pcs	1,400.00
UB	Laptop Equivalent to Lenovo V320-17IKBR x 5 pcs	4,400.00
UB	Printer Equivalent to MFP Laser A3 HP M436nda	800.00
UNI	Workstation, AMD Threadripper 2990WX/128GB/SSD 250GB/HDD 1TB/RTX 2080/850W 1 pcs	3,800.00
UNI	Desktop computer, AMD Ryzen 5 2400g/8GB RAM/SSD 120GB/HDD 1TB/RX Vega 11 40 pcs	11,700.00
UNI	Monitor 21.5" HP 22f IPS, 1920x1080 (Full HD) 5ms 40	4,400.00

	pcs	
UNI	Keyboard + Mouse Genius Slimstar C130 40 pcs	400.00
UNI	UTP cable kat. 6A, Draka type UC500 S23 4P FRNC - tested up to 500MHz for 10GbE, 305m 1 ps	200.00
UNI	Notebook HP Pavilion 15-cx0010nm (4RM14EA) 15.6" FHD Intel Hexa Core i7 8750H 12GB 1TB+256GB SSD GeForce GTX1060 crni 4-cell 6 pcs	7,000.00
UNI	Laptop HP 15-da0037nm Win10 Silver 15.6"FHD, Intel QC i5-8250U/8GB/256GB SSD/MX130 4GB 7 pcs	4,400.00
UNI	Notebook HP 15-bs047nm - 2KG97EA Intel® Core™ i3 6006U 2.0GHz, 15.6", 256GB SSD, 8GB 10 pcs	4,000.00
UNI	Notebook Apple Macbook Pro 2017 Touch bar, 13", 512 GB, Silver, International keyboard 3 pcs	5,300.00
UNI	Notebook case TwelveSouth - BookBook for MacBook Air 13 inch 3 pcs	300.00
UNI	Desktop computer APPLE iMac 21.5" 4K Quad-core i5 3.4GHz / 8GB / 1TB 4 pcs	6,200.00
UNI	Printer HP Color LaserJet Pro MFP M281fdw - T6B82A Laser 4 pcs	1,200.00
UNI	Projector BENQ MH535 DLP, 1920 x 1080 (Full HD), 203 W 1 pcs	700.00
UNI	Interactive board HITACHI TrauBoard FX-89WE2 1 pcs	1,000.00
UNI	Switch/router Lan Switch TP-Link TL-SG3452 T2600G-52TS , 48x10/100/1000+ 4xSFP Gigabit 1 pcs	400.00
UNIKG	Server Equivalent to Server HPE DL360 Gen10 10C4114 (CPU Xeon S-4114, RAM 16GB)	2,223.00
UNIKG	Hard disc Equivalent to HP 1.2 TB 12G SAS 10K 2.5in SC ENT HDD x 2pcs	743.00
UNIKG	Hard disc Equivalent to Lenovo 600 GB 10K 6GBPS SAS 2,5 inch-sff x 3pcs	1,115.00
UNIKG	Desktop computer Equivalent to DELL Vostro 3670 MT Intel® Core™ i5-8400 2.8 GHz x 30pcs	15,200.00
UNIKG	Monitor Equivament to HP 22y (2YV09AA) TN monitor 21.5" x 30pcs	2,432.00
UNIKG	Laptop Equivalent to HP Gaming Pavilion - 15-cx0010nm - 4RM14EA x 2pcs	2,162.00
UNIKG	Laptop Equivalent to Asus ZenBook UX461UN-E1022R	1,250.00
UNIKG	Laptop Equivalent to Laptop DELL Inspiron 15 3576 - NOT12199 x 4pcs	2,567.00
UNIKG	Server Equivalent to Dell OptiPlex 5060 MT	892.00
UNIKG	Router Equivalent to MikroTik CCR1009-7G-1C-1S+	440.00
UNIKG	WiFi Router/Access Point Equivalent to MikroTik RB4011iGS+5HacQ2HnD-IN	256.00
UNIKG	Projector Equivalent to EPSON EB-U42 3LCD, UHE, 1920 x 1200	620.00

ANNEX 2 Remaining budget after the first purchase of equipment

Partner	Amount in EUR
UNS	8,685
UB	6,442
UNI	3,186
UNIKG	3,167
Total	21,479

ANNEX 3 Specification of the equipment (Second round)

Partner	Nature, type	Amount Excl. VAT
UNS	Desktop Equivalent to HP Desktop Pro G2 – 5QL11EA with OS (Windows 10 Pro 64bit) x 8 pcs	4,000.00
UNS	Monitor Equivalent to HP EliteDisplay E243 – 1FH47AA x 8 pcs	1,440.00
UNS	Quadcopter Equivalent to DJI Dron Mavic 2 Pro x 1 pc	1,200.00
UNS	Projector Equivalent to BENQ MW535 x 3pcs	1,200.00
UNS	Laser Printer Equivalent to HP LaserJet Pro MFP M227sdn x 1 pc	150.00
UNS	Tablet Equivalent to Samsung Galaxy tab S5e x 2 pcs	700.00
UB	Desktop computers with OS x 4 pcs	2,320.00
UB	Laptop Equivalent to HP ProBook 250 G7 6BP50EA x 5 pcs	3,200.00
UB	Switch Equivalent to CISCO SG-300-52 52-port SRW2048-K9-EU x 1 pc	900.00
UNI	Interactive Whiteboard Equivalent to HITACHI TrauBoard FX-89WE2 x 1 pc	815.00
UNI	Projector Equivalent to EPSON EB-675Wi 3LCD x 1 pc	1,420.00
UNI	Conference Camera Equivalent to Logitech BCC950 x 1 pc	215.00
UNI	Portable Speakerphone Equivalent to JABRA SPEAK 510 x 1 pc	145.00
UNI	Flatbed Scanner Equivalent to HP ScanJet Pro 3500 f1 (L2741A) x 1 pc	335.00
UNI	Laser Printer Equivalent to HP M454dw - W1Y45A x 1 pc	245.00
UNIKG	External SSD Enclosure Equivalent to LC Power LC-M2-C-NVME x 1 pc	25.00
UNIKG	SSD Controller Equivalent to ADATA SSD XPG SX6000 Pro ASX6000PNP-256GT-C x 1 pc	45.00
UNIKG	SSD Equivalent to BioStar S120 Plus Series 512GB x 2 pcs	95.00
UNIKG	SSD Equivalent to Silicon Power Ace A55 256GB x 14 pcs	465.00
UNIKG	Laptop with OS Equivalent to HP EliteBook 840 G6 I5-8265U with Windows 10 Pro x 1 pc	1,035.00
UNIKG	Docking Station Equivalent to HP USB-C Dock G5 - 5TW10AA USB-C x 3 pcs	530.00
UNIKG	Projection Screen (Wall) Equivalent to VISION 240x240 x 1pc	75.00
UNIKG	Speakers Equivalent to Genius SP-HF500A 2.0 x 1 pc	35.00
UNIKG	WiFi Router / Access Point Equivalent to MikroTik RB4011iGS+5HacQ2HnD-IN x 2 pcs	475.00

UNIKG	Monitor Equivalent to Dell S2419HGF x 1 pc	180.00
		21,245.00