LPI 0088-2017 - 8" TABLETS

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1. OBJECTIVE The Ceibal Centre is calling for international public bids for the procurement of up to 10,000 8" tablets with Android operating system.

2. SPECIFICATIONS

This article describes the mandatory and desirable requirements for the target product.

The bidder must complete the tables presented in appendices I, II, III and IV, and submit his bid in accordance with the instructions in article **3. BID**. The Ceibal Centre reserves the right to reject a submitted bid that fails to respect such instructions.

2.1. MANDATORY REQUIREMENTS

2.1.1. SIZE

8 inches.

2.1.2. PROCESSOR

Minimum: Quad Core. Please specify.

The performance of the processor will be assessed using the Geekbench Floating Point

Multicore benchmark. Minimum required: 1100.

2.1.3. RAM MEMORY

Minimum: 1GB.

2.1.4. INTERNAL STORAGE

Minimum: 16GB. External devices will not be accepted as a mass storage solution.

2.1.5. RESOLUTION

Minimum: 1280 x 800. **2.1.6. MULTIMEDIA**

Built-in microphone and speaker/s.

3.5mm audio jack for headphone output.

Front camera and rear camera. Please specify characteristics of both cameras. Minimum rear camera resolution: 2MP.

2.1.7. PORTS

Micro SD card reader supporting at least 32GB cards.

2.1.8. CONNECTIVITY

Bluetooth.

WiFi: 802.11b/g/n, or higher. WiFi performance of the device will be assessed by calculating the file download speed, with and without line of sight to the access point, in the 2.4 and 5GHz frequency bands. Minimum required: 30 Mbps.

2.1.9. BATTERY

Minimum: 3500mAh.

2.1.10. CHARGER

Europlug power plug (CEE 7/16) with insulation at the top of the 220 V AC contact pins.

2.1.11. OPERATING SYSTEM

Android 5.0 or higher. Please specify.

2.1.12. LANGUAGE

Operating system and all its interfaces and configuration options must be in Spanish.

2.1.13. ECO FRIENDLY

Must comply with the RoHS directive.

2.1.14. FCC LABEL

The device is to be delivered to Ceibal with the FCC compliance statement (FCC LABEL) visible on its housing.

2.1.15. CEIBAL LOGO

Must be visible on housing, alcohol-proof and non-removable when packaging tapes are stuck to or removed from its surface. Please specify printing method.

2.1.16. SERIAL NUMBER AND BAR CODE

The device must be identified with a unique serial number (SN) that will be printed on the housing together with the corresponding bar code. Please specify printing method. The device must also have a unique identifier (Id) obtainable by software. Ideally, the SN and Id identifiers should match each other. Please specify.

2.1.17. DISK IMAGE

The devices must be delivered with a certified software image.

The tablet will be delivered to the end user with an interface designed especially for the target audience (hereinafter: CeibalOS) as the default operating environment, in addition to having the Android launcher. For this purpose, when submitting the bid, the bidder can deliver the table in Appendix IV:

Requirements for installation of CeibalOS. Otherwise, Ceibal may request this information during the bid assessment process. The bidder must provide technical assistance during the field validity of his product so that subsequent versions of CeibalOS are fully operational on the device.

2.1.18. CONNECTION OF PERIPHERALS

The bidder must specify whether the connection to the motherboard of the peripherals (screen, touchscreen, speakers, battery, antennae, etc.) is by means of soldering or connectors. The use of connectors is preferred, as this will facilitate the removal of components and repairs.

2.1.19. UPDATING SYSTEM

Please specify whether the device will have an OTA (Over the Air) remote updating system and/or a removable device (e.g. SD card). In the case of the OTA method, the bidder must submit a document with the operational description, before confirmation of production or first shipment at the latest (see documentation requirement 2.3.2.1.7).

2.2. DESIRABLE REQUIREMENTS

2.2.1. ADDITIONAL PORTS

Video output (miniHDMI, microHDMI).

2.2.2. KIND OF CHARGER PLUG

- 2.2.2.1. Barrel-type charging connector.
- 2.2.2. Micro USB type-C charging connector.

Please specify impact on final price.

2.2.3. TABLET PROTECTION

Sheath, case, or cover for tablet protection. If you offer this item, please provide specifications.

Please specify impact on final price.

2.2.4. MAGNETIC MICRO USB CHARGING AND DATA CONNECTOR

Factory-installed magnetic micro USB charging and data connector. If you offer this item, please provide specifications.

Please specify impact on final price.

2.2.5. SCREEN PROTECTION

Factory-installed tempered glass for screen protection. If you offer this item, please provide specifications.

Please specify impact on final price.

2.2.6. HARDWARE TEST

Features allowing user to check the different peripherals and hardware modules for the diagnosis of overall operation of the device. Preferably independent of the operating system.

2.3. DOCUMENTATION

2.3.1. SUBMITTED WITH BID

The documentation requested in this subarticle must be submitted along with the bid.

2.3.1.1. TECHNICAL SPECIFICATIONS

A document with the technical specifications of each model tendered.

2.3.1.2. SOFTWARE IMAGE INSTALLATION PROCEDURE

Please specify procedures and tools required to install the software image generated. Ideally it should be possible to perform the procedure using a removable medium (e.g. SD card). If the procedure requires connecting the computer to a PC, it should ideally work on Linux.

2.3.2. DELIVERY PRIOR TO CONFIRMATION OF PRODUCTION OR SHIPMENT

The mandatory documentation requested in this subarticle must be delivered prior to production confirmation or prior to each shipment, as applicable, at the latest. Delivery should be made as soon as possible, ideally at the time of submitting the bid, together with the documentation requested in subarticle 2.3.1.

2.3.2.1. MANDATORY DOCUMENTATION

2.3.2.1.1. BILL OF MATERIALS (BOM)

The bidder must submit a form with all the hardware components that make up the device, each with a code identifying it, including the housing and any other individual components that can be replaced in the event of damage or malfunction.

2.3.2.1.2. EXPLODED VIEW DRAWING

The bidder must submit the exploded view drawing describing the atomized parts, each with a code identifying it, and their assembly.

2.3.2.1.3. SCHEMATICS

Schematics and layout of the motherboard in digital format.

2.3.2.1.4. CERTIFICATIONS

In addition to mandatory requirements 2.1.13 (RoHS) and 2.1.14 (FCC), all the certifications of the device must be listed with the relevant supporting documents. For instance, UL1950/IEC950/EN60950, IEC 61000, EN55022, etc. The degree of IP protection of the device (IEC 60529) is of particular interest.

2.3.2.1.5 INFORMATION SHEET FOR EACH DEVICE

The successful bidder must deliver an e-form with the following information on each device:

- Part number.
- Serial number.
- Number of pallet/master box on/in which the device is shipped.
- MAC addresses of all the network cards of the device.
- Part number and serial number of the main components (minimum: motherboard, screen, battery and touchscreen)

Identifier obtainable by software (see requirement 2.1.15)

2.3.2.1.6. PACKING CONDITIONS

The bidder must specify the following packing conditions:

- Measurements of individual box.
- Weight of individual box.
- Measurements of master box.
- Weight of master box
- Individual boxes per master box.
- Master boxes per pallet.
- Pallet height.

2.3.2.1.7. UPDATING SYSTEM

Operational description of the updating system in the case of the OTA method (see requirement 2.1.19). Particularly, please specify:

- 1. Whether the infrastructure is provided by the bidder.
- 2. Whether the infrastructure can be hosted in Uruguay.
- 3. Whether the Ceibal Centre has exclusive control over the updates to be sent.
- 4. Whether the Ceibal Centre can make or request changes to the software of the equipment once it has been released to the field.

2.3.2.2. DESIRABLE DOCUMENTATION

2.3.2.2.1. PROCEDURE FOR RECORDING ID OBTAINABLE BY SOFTWARE

Document specifying tools and procedure for recording Id obtainable by software and keeping the link between this Id and the serial number on the housing in case of a repair. See requirement 2.1.15.

3. BID

To facilitate the assessment of the bids, the submission of documents should ideally be clearly segmented, **identifying each product by its corresponding model**.

In order to ensure the completeness of the information provided in the tender, Appendix VI provides a checklist with all the items it must include.

3.1. SUBMISSION AND HOW TO QUOTE

For each model tendered, the bidder must complete, (Envelope 2 Technical Bid):

- Compliance table in APPENDIX I, with all items completed.
- Table specifying spare parts in APPENDIX II, **except for quotation**. The failure rate of each component is of particular interest, especially the motherboard, battery, screen and touchscreen.
- Documentation table in APPENDIX III, with all items completed.
- Requirement compliance table for installation of the CeibalOS launcher in Appendix IV, with all items completed and including the information requested therein.

At the time of submitting the bid, the bidder must provide the technical specifications of each model tendered (requirement 2.3.1.1).

The successful bidder may delay submission of the documentation detailed in subarticle 2.3.1.2 until before shipping the devices at the latest. However, this information should ideally be submitted as soon as possible, preferably at the time of submitting the bid.

The bidder must submit his technical bid as follows:

- 1. Folder with Appendices I, II, III and IV completed for all models tendered, and the information requested in such appendices (in particular, that requested in Appendix IV).
- 2. Folder with documentation requested in subarticle 2.3.1 (technical specifications and software image installation procedure) for all models tendered.
- 3. Folder with the information requested in 2.3.2 that the bidder can provide at the time of submitting the bid.
- 4. Folder with warranty specifications and delivery deadlines in accordance with the requirements in articles 4. WARRANTY, and 5. DEADLINES AND TERMS OF DELIVERY in these bidding conditions.
- 5. Folder with the complementary technical information that the bidder may deem suitable to provide.

In **Envelope 3 Financial Bid,** the bidder must deliver:

- Quotation according to the following volume bands:
- o Band 1: fewer than 1,000 units
- o Band 2: between 1,001 and 5,000 units
- O Band 3: more than 5,000 units

In the event of tendering the DESIRABLE items accompanied by the request to specify impact on the final price of the equipment, the bids must be submitted in the same volume bands.

• Table specifying spare parts in APPENDIX II, including quotation.

3.2. SAMPLES

Along with the tender, the bidder must submit FIVE samples of the models tendered, or produce documentation certifying that they will reach the Ceibal Centre within 9 calendar days of the opening date (such documentation must be in the name of the Ceibal Centre for shipping purposes). If the Ceibal Centre already has samples of the models tendered, this requirement will be considered fulfilled.

In the event of tendering desirable requirements 2.2.3, 2.2.4 and 2.2.5, the samples should ideally be delivered together with the hardware samples.

The specifications and performance of the end product cannot be less than those of the sample. This aspect will be ascertained through the quality controls that will determine acceptance of the product.

The samples may be returned in conditions different from those in which they were delivered. After winning the bid, the bidder will have 4 weeks to collect the samples presented. If the bidder fails to collect them within this period, he will forfeit his right to claim them, and the Ceibal Centre may freely dispose of them.

The successful bidder is required to deliver at the Ceibal Centre 40 devices exactly like those tendered within 10 business days after the successful bid has been announced.

4. WARRANTY

The bidder must ensure that the products supplied under the contract are new, complete, unused and free from defects attributable to design, materials, manufacture, storage conditions (packaging, temperature and humidity), transfer or any act or omission by the bidder that could manifest itself during the normal operation of the products under the conditions prevailing in the country.

The Ceibal Centre accepts the following warranty conditions:

- (a) DOA Warranty (dead on arrival) warranty: 10 devices every 1000 devices for replacement of faulty new devices within 90 days.
- **(b)** Warranty against manufacturer's defects for a period of 365 days from arrival: The supplier must indicate the method for dealing with faulty equipment.
- (c) Warranty against systemic failures for a period of 730 days from arrival: The supplier must provide the necessary spare parts or replace the equipment if the number of failures is greater than 10 times the percentage specified in APPENDIX II: SPARE PARTS. The costs arising from the enforcement of this warranty are to be borne exclusively by the supplier.

If the bidder cannot satisfy these conditions, he must include the terms of the warranty in his tender. The Ceibal Centre will take account of these terms in the assessment process.

5. DEADLINES AND TERMS OF DELIVERY

The bidder must specify the deadline for delivery of the equipment, to be met after the successful bid has been announced. Ideally, the deadline for hardware delivery should be 50% in the first half of May 2017 and 50% in the first half of June 2017. If the bidder cannot satisfy such conditions, he must include the terms of delivery in his tender. The Ceibal Centre will take account of these terms in the evaluation process.

The feasibility of installing the software image to be developed on the devices during the infactory manufacturing process will be an asset. The bid must indicate the deadline for this image to be available for installation in the factory, in order to meet the specified delivery deadlines. The bidder must also indicate if a delay in producing the image will have a proportional impact on the delivery deadlines.

The bidder must deliver the devices in accordance with the following indications:

- Each pallet must be labelled with the following information:
 - Device model / lot / batch (pallets containing more than one device model will not be accepted).
 - Number of pallets / total pallets in the lot.
 - o Number of master boxes on pallet.
 - List of master boxes constituting the pallet.
- Each master box should be labelled with the following information:
 - Device model / lot / batch.
 - Master box number / total master boxes in the lot.
 - Serial number (barcode and alphanumeric) of each device in the master box.
 - Product description
- Each individual box must be labelled with the following information:
 - o Device model.
 - Serial number (bar code and alphanumeric) of the device.

The design of each individual box and each master box should be customized in accordance with the specifications that will be agreed between the Ceibal Centre and the successful bidder.

6. APPENDIX I: COMPLIANCE TABLE

SPECIFI	SPECIFICATIONS MANDATORY REQUIREMENTS		COM	1PLIES	OBSERVATIONS
MANDA			Yes	No	
2.1.1	SIZE	8 inches			
		Processor specification			
2.1.2	PROCESSOR	Minimum: quad core			
2.1.3	RAM MEMORY	Minimum: 1 GB			
2.1.4	INTERNAL STORAGE	Minimum: 16GB			
2.1.5	RESOLUTION	Minimum: 1280 x 800			
2.1.6		Built-in microphone and speakers			
		3.5mm audio jack for headphone output			
	MULTIMEDIA	Front and rear camera			
		Minimum rear camera			
		resolution: 2 MP			
		Specification of both			
		cameras			
2.1.7	PORTS	Micro SD card reader			
		supporting at least 32			
		GB cards.			
2.1.8	CONNECTIVITY	Bluetooth			
		WiFi: 802.11 b/g/n or			
		higher			
2.1.9	BATTERY	Minimum: 3500mAh			
2.1.10	CHARGER	Europlug power plug			
		(CEE 7/16).			
		Insulation at the top of			
		the 220 V AC contact			
		pins.			
2.1.11	OPERATING SYSTEM	Please specify Android			
		version			
		Minimum: Android 5.0			
2.1.12	LANGUAGE	Spanish			
2.1.13	ECO FRIENDLY	Complies with RoHS			
		directive			
2.1.14	14 FCC LABEL	Visible on housing			
2.1.15	CEIBAL LOGO	Visible on housing			
		Alcohol-proof			
		Not removable when			
		packaging tapes are			
		stuck to or removed			
		from its surface			

			Spacify printing			
			Specify printing method			
2.1.16	SERIAL NUMBER AND BAR CODE		Unique serial number			
2.1.10	SERIAL NOWIDER AND BAR CODE		(SN) and barcode			
			Specify method for			
			printing on housing			
			Unique identifier (Id)			
			obtainable by software			
			Specify whether Id and			
			SN match			
2.1.17	DISK IMAGE		Delivery with certified			
			disk image			
			Delivery of appendix			
			with complete			
			CeibalOS launcher			
			installation			
			requirements			
			Technical assistance			
			during field validity of			
			the product			
2.1.18	CONNECTION OF PERIPHE	RALS	Specify whether			
			peripheral connection			
			to motherboard is			
			through soldering or			
			connectors			
2.1.19	UPDATING SYSTEM		Specify whether the			
			device will have an OTA			
			(Over the Air) remote			
			updating system			
			and/or a removable			
		ND 4TCT	device (e.g. SD card)			
2.2.1		NDATOR	RY REQUIREMENTS	I	1	ī
2.2.1	ADDITIONAL PORTS		Video output			
			(miniHDMI,			
222	KIND OF CLARGED	2224	microHDMI)			
2.2.2	KIND OF CHARGER	2.2.2.1				
	PLUG		Specify impact on final			
		2.2.2.2	price			
		2.2.2.2	Micro USB type-C			
			connector. Specify impact on final price			
2 2 2	TABLET DROTECTION	<u> </u>				
2.2.3	TABLET PROTECTION		Sheath, case, or cover for tablet protection.			
			Detail specifications.			
			Please specify impact			
			on final price			
2 2 4	MAGNETIC MICRO USB		Factory-installed			
2.2.4	INIAGINETIC INIICKO OSB		ractory-mstalled			

	CONNECTOR FOR CHARGING AND	magnetic micro USB		
	DATA	charging and data		
		connector. Provide		
		specifications. Specify		
		Impact on final price		
2.2.5	SCREEN PROTECTION	Factory-installed		
		tempered glass for		
		screen protection.		
		Provide specifications.		
2.2.6	HARDWARE TEST	Diagnostic tool for		
		peripherals and		
		hardware modules		

7. APPENDIX II: SPARE PARTS

Spare part	Part Number	Estimated % of Failures	Unit Price (US \$) – EX Works	Minimum lot	Validity period of the bid (*)	Delivery deadline
Motherboard						
Battery						
Screen						
Touchscreen						

^(*) Complete this column only in Envelope 2 Financial Bid (the rest of the information must be completed in Envelope 2 Technical Bid and Envelope 3 Financial Bid)

8. APPENDIX III: DOCUMENTATION

DOCUMEN	OCUMENTATION			1PLIES	OBSERVATIONS
			Yes	No	
	DELIVERY A	AT THE TIME OF SUBMITTING THE BID	<u> </u>		
2.3.1.1	TECHNICAL	Document with technical specifications			
	SPECIFICATIONS	of each model tendered			
2.3.1.2	SOFTWARE	Document with procedure and			
	IMAGE	necessary tools for installation of			
	INSTALLATION	software image.			
	PROCEDURE				
DELI	VERY PRIOR TO CON	FIRMATION OF PRODUCTION OR SHIPME	NT, W	/HICHE	VER APPLIES
MANDATO	DRY DOCUMENTATION	ON			
2.3.2.1.1	BILL OF	BOM: a form with the list of			
2.3.2.1.1	MATERIALS	components and their corresponding			
	IVIATERIALS	code.			
		code.			
2.3.2.1.2	EXPLODED VIEW	Exploded view Drawing with identified			
	DRAWING	parts and their assembly			
2.3.2.1.3	SCHEMATICS	Schematics and layout of motherboard			
		in digital format			
2.3.2.1.4	CERTIFICATIONS	Statement of standards the device			
		complies with.			
		Supporting documents			
2.3.2.1.5	INFORMATION	Part number of each device			
	SHEET FOR EACH	Serial number of each device			
	DEVICE	Number of pallet on which device is			
		shipped.			
		Number of master box in which device			
		is shipped			
		MAC address of all network cards of			
		each device			
		Part number of main components			
		Part number of main components (minimum: motherboard, display and			
		·			
		(minimum: motherboard, display and battery)			
		(minimum: motherboard, display and			
2.3.2.1.6	PACKING	(minimum: motherboard, display and battery) Identifier obtainable by software of			
2.3.2.1.6	PACKING CONDITIONS	(minimum: motherboard, display and battery) Identifier obtainable by software of each device			

		Weight of master box		
		Individual boxes per master box		
		Master boxes per pallet		
		Height of pallet		
2.3.2.1.7	UPDATING	Specify whether the device will have		
	SYSTEM	an OTA (Over the Air) remote updating		
		system and/or a removable device		
		(e.g. SD card)		
		In the case of the OTA system, specify		
		its operation. Particularly:		
		* Whether the infrastructure is		
		provided by the bidder.		
		* Whether the infrastructure can be		
		hosted in Uruguay		
		* Whether the Ceibal Centre has		
		exclusive control over the updates to		
		be sent.		
		* Whether the Ceibal Centre can make		
		or request changes to the software of		
		the equipment once it has been		
		released to the field.		
DESIRABLE	DOCUMENTATION			
2.3.2.2.1	PROCEDURE TO	Document specifying tools and		
	RECORD ID	procedure for recording Id obtainable		
	OBTAINABLE BY	by software and keeping the link		
	SOFTWARE	between this Id and the serial number		
		on the housing in case of a repair.		

9. APPENDIX IV: REQUIREMENTS FOR CeibalOS LAUNCHER INSTALLATION

CeibalOS is a launcher that provides the user with a complete operating environment. CeibalOS and Android will coexist on the final device, CeibalOS being the default operating environment. See requirement 2.1.17 DISK IMAGE.

The following is the information that the bidder must provide and the capabilities required for the correct installation and configuration of CeibalOS:

				PLIES	OBSERVATIONS
REQ	UIREMENTS		Yes	No	
9.1	MODIFYING BASE IMAGE	Modifying base image of the operating system			
9.2	SYSTEM PRIVILEGES	Provide system platform key			
9.3	CUSTOMIZATION	Specification of procedures and tools to customize the software Specification of changes that can be made to the software image Ability to customize pre-loaded applications Ability to include static content (books, audio, video, etc.). Ability to customize user interface Ability to customize system default settings Ability to add system files, e.g.,			
9.4	DEVELOPMENT	SSL certificates Request response time Iteration time of each software image development cycle			
9.5	CERTIFICATION	Certification of software image developed Specification of the cost of software image certification The bidder bears the cost of certification of the first software image	-		

- 9.1 Modifying base image: modifying the base image of the operating system that the device has.
- 9.2 System privileges: providing the platform key so that Ceibal can sign new versions of the operating environment so that they have system privileges
- 9.3 Customization: specifying procedures and tools to customize the software of the tablets, also indicating what kind of changes can be made to the software image.

For instance, the following modifications are of interest:

- Applications that come pre-loaded by default, including both user and system applications
- Adding static content (books, audio, video, etc. so that it comes pre-loaded on the device)
- Customizing the user interface (e.g. the wallpaper, the image presented as the device starts, etc.)
- Customizing the default settings of the system (for example the language of the device)
- Being able to add other system files, for example SSL certificates for access to Ceibal systems.
- 9.4 Image development cycle. The process of producing the software image based on Ceibal's requirements will be planned jointly with the successful bidder. The relevant documentation will be provided and delivery deadlines will be agreed for this purpose.

As part of his bid, the bidder may specify the response time in the event of a Ceibal request, whether a question about the development process or general queries. It is expected that this development process will be executed in several cycles, so the bidder should ideally indicate the iteration time of each image. Each cycle may require direct communication between Ceibal and the manufacturer.

In order to measure the development cycles, these can include the following tasks:

- Modification of basic configurations such as default language, or time zone, among others.
- Installation of Ceibal applications as system applications.
- Disk partitioning.
- Uploading digital certificates to specific directories
- 9.5 Certified software image: it is necessary to have the certification of the software image developed, so as to have the operating system's own applications and store (for this particular point, the deadlines can be evaluated on a case by case basis).

Please specify the cost of image certification. The bidder will bear the cost of the first software image developed for the device.

10. BID CHECKLIST

1	Complete all the items in appendices I, II, III and IV, and include the information requested in them in the bid.
2	Specify software image delivery deadline for factory installation, so as to meet specified deadlines.
3	,
4	Quotation according to the bands established in the bidding conditions.
5	Please specify terms of warranty if you cannot meet those established by Ceibal
6	Please specify deadlines for delivery of the end product
7	Submission of the bid in accordance with segmentation into folders as defined in article 3. BID for the corresponding device.