



The Hashemite Kingdom of Jordan

هيئة تنظيم النقل البري  
LAND TRANSPORT REGULATORY COMMISSION



**Annex III**  
**Response to Vendor Inquiries Regarding**  
**RFP # 2/2019/special supplies**

**Design, Implementation, and Operation of an**  
**Intelligent Transportation System (ITS) for**  
**Public Transportation in Jordan**

**A Multitenant, Standards-Based, Account-Based, and**  
**Closed Payment System**

September 8, 2019

**Inquiry 1:** It is mentioned in section 2.2 “Compatibility of clearing house with existing AFCS in Amman” What are the current AFCS in Amman? And what kind of integration you want to do?

**Response 1:** Bidders should comply with the specifications in the RFP and indicate what they would require from GAM in order to be compatible and interoperable with their system. LTRC will be responsible for coordinating with GAM to ensure they comply with the standards-based system.

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**Inquiry 2:** What is the garage measurement? Is there a control room that we can use it in that Garage? And how many Garage is available for us to use?

**Response 2:** A GIS map showing bus terminals and stops is enclosed. Refer to Inquiry 117 for more information on the control room.

**General comment:** Please note that the vast majority of public transport vehicles (over 80%) are currently individually owned and operated and do not have any garages. Routes typically start and end at one of the bus terminals.

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**Inquiry 3:** How many TVMs are needed? And please specify the locations

**Response 3:** Please refer to Inquiry 37.

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**Inquiry 4:** It is mentioned in section 6.1.1.1 point 7 “The AFCS shall support issuance of cards by third party retailers, POSs, Internet fulfillment services, and other devices, such as self-service kiosks and vending machines”. How does your process looks like for card issuance through internet fulfillment?

**Response 4:** If a person purchases a card online, they can have the physical card delivered by mail or they can pick it up at a specific location. This process should be the responsibility of the winning bidder.

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**Inquiry 5:** Section 6.1.1.3 item 2 states Wi-Fi is available in garages. Please confirm we do not need to offer Wi-Fi for depots/garages

**Response 5:** You do need to offer Wi-Fi for depots/garages—for the purpose of processing operations data, not necessarily for use by riders.

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**Inquiry 6:** Section 6.1.1.7 item 15 states barcode printer to be a laser printer. Is a thermal printer acceptable?

**Response 6:** Yes

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**Inquiry 7:** Section 6.1.2.2 item 10 Support all payment methods in Jordan?  
Please list

**Response 7:** The bidder should investigate available payment methods in Jordan.

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**Inquiry 8:** Section 6.1.2.3 item 6 please explain 'rolling pass functionalities'

**Response 8:** Rolling pass is a fare structure which is activated from the first tap/use. Vendors are requested to support all capping time periods which are calendar-based. Supporting both rolling pass and calendar based is optional.

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**Inquiry 9:** Section 6.1.2.11 item 3 Arrival reader boards: could you please specify the followings:

- a. How many stops display are needed
- b. How many public station
- c. How many lines should be appear in each display

**Response 9:** Please use best practice, based on the information provided in the RFP on routes and route lengths. Also note that this is related to an optional item that will not be part of the evaluation.

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**Inquiry 10:** It's mentioned in page 12 that the prices should be exclusive of customs but it's mentioned in page 5• in financial "All prices should be quoted in Jordanian Dinars inclusive of all expenses, governmental fees and taxes, including sales tax". please clarify if customs goes under government fees or not.

**Response 10:** The quoted text in page 12 is a typo. Please note that all prices should be inclusive of customs.

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**Inquiry 11:** Section 3.2.2 first point "Use of different smart cards issued by different issuers to ensure ticketing interoperability" please list the issuers and cards specifications

**Response 11:** Currently there are no issuers except in Amman, but in the future the system should support cards issued by universities, employers and banks in addition to LTRC cards. See Inquiry 1 for details.

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**Inquiry 12:** We need to know what is the brand/model of the current tracking device and please confirm that is available in all buses

**Response 12:** Currently buses have no installed devices. Bidders should provide all devices and setup, configure to operate with the backend systems.

**Inquiry 13:** Section 3.3.1 "The winning bidder will be responsible for designing, building, and testing the network." While in section 6.1.1.3 point 1 "Communication in the field will occur using the existing onboard routers' cellular connection". we need clarifications on the availability of cellular connection in the buses, and please clarify if it's include an Ethernet port

**Response 13:** Please refer to inquiry 12. Cellular connection should be provided. Please abide by the requirement in Section 3.3.1

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**Inquiry 14:** For how long you want to keep the data transactions

**Response 14:** Data should be available all times for historical analysis, online studies or other purpose required by LTRC. However, to maintain a good user experience, it is required from the vendor to provide a solution for keeping necessary live data available for different record types.

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**Inquiry 15:** Could you please list the companies that are participated in this tender

**Response 15:** Yes, the list enclosed with the responses

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**Inquiry 16:** For how long you want to keep your data transaction

**Response 16:** See inquiry 14.

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**Inquiry 17:** For the hosting, is it acceptable to host our solution on MoDEE could? Or is it acceptable to use Jordan private cloud like( Zain, Orang)? For On-Premise solution please clarify where is the server room located, is that room is PCI DSS certified?

**Response 17:** All options listed in the inquiry are acceptable, but please note conditions pertaining to the MoDEE cloud, such as the cybersecurity policy mentioned in the RFP.

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**Inquiry 18:** What is the working hours for the buses

**Response 18:** For internal routes in Jearsh Governorate: From 5:00 AM to 7:00PM, Main routes between governorates: From 5:00 AM to 11:00PM and Universities routes: From 6:00 AM to 6:00PM. These working hours are subject to change according to the operational plan and LTRC instructions.

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**Inquiry 19:** Could you please clarify the followings

a. Marketing & Advertisement

During the implementation phase of the system normally there is a marketing campaign initiated in parallel in order to support the acceptance of the new system. Should the bidder offer such a marketing campaign?

b. Inspection Service

According to 6.1.1.5, the tender requires Inspection units. Who will be responsible for the execution of this service. Should the bidder offer such service?

c. Top up fees for agents 6.3.6.6 / Page 48, 7.2.1.

The bidder is obliged to take care of all agent fees. As the number of top ups at 3<sup>rd</sup> Party POS is not predictable, it is impossible to reasonably calculate the related cost for agent fees for the bidder.

We therefore suggest relating the compensation of the bidder for the top ups at 3<sup>rd</sup> party POS to the revenue generated during this process. Does LTRC accept this proposal?

**Response 19:**

a. The winning bidder must provide a plan for a marketing campaign, but it is not his responsibility to implement the plan.

b. LTRC will execute the service after receiving training from the winning bidder.

c. Please refer to Annex II (Addendum) .

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**Inquiry 20:** 2.3 Phasing and Duration The duration of each phase is presented in Table 1. The total duration of the contract will be 66 months. We think that there is not enough time for each phase, especially in Phase 3.

**Response 20:** See response to Inquiry 21 below.

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**Inquiry 21:** How many buses are going to be equipped during Phase 3? It is not clear if more than the 217 buses for the pilot should be equipped. Can you confirm the number of busses in the pilot stage? Can you confirm the number of busses in the full contract? (excluding pilot)

**Response 21:** Note that the number of buses listed in Annex 1 of the RFP is  $217+437=654$ . At least 217 buses should be equipped in Phase 3. The remaining buses should be equipped in the first 4 months of Phase 4.

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**Inquiry 22:** 3.2.3 Final Design: The final design should also cover the following items: (...) Final as-built Documentation

"As-built" documentation cannot be prepared during the design phase.

**Response 22:** Correct. As-built documentation should be provided after implementation.

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**Inquiry 23:** Is the BRT system under the scope of this project? If so, how many BRT stations will be included in the scope? How many BRT and non-BRT buses are there?

**Response 23:** It is not under the scope of the pilot required within this RFP. However, the system being implemented through this project is intended to

be a national system that will cover all modes of public transport in Jordan, including—in the future—BRT.

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**Inquiry 24:** 3.2.1 Design Review and Approval The following documents shall be provided to LTRC for the design review: (...)Installation plans for each location and bus type

What is the scope of the installation plans in phase 2?

**Response 24:** Please refer to inquiry 20.

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**Inquiry 25:** How is the system expected to behave when in offline mode, given that it is an account-based system and intelligence is expected to be moved from cards and readers to the CDS?

**Response 25:** In the TOR we listed different related requirements for offline including the use of hotlists, and synchronization when the connection is restored. Vendors are encouraged to provide solutions to keep the same user experience between online and offline. This include using historical information of the rider to determine the risk factor if the ticket couldn't be validated. Options to use additional information on the card such as risk factor is acceptable.

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**Inquiry 26:** 5. System Design & Architecture The architecture and design should support the following requirements: (...)

Supporting data exchange for any intermodal journey, starting with planning and booking, right up to actual travel and payment even if the journey spans multiple operators or legs Must the ITS solution include a journey planner? What transportation systems will allow booking?

**Response 26:** Yes, it must support journey planner. The vendor should consider a single journey with multiple bus operators. Currently, there is no existing ITS systems but the architecture of the system should allow a rider to book for a journey

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**Inquiry 27:** 5.1 System Architecture - The System Architecture presented in section 5.1 is missing a reload network, which is required for the closed-loop fare media.

**Response 27:** Correct. Vendors shall consider the reload network whether this is happening through a network of ATVMs or POS. ATVMS and POS equipment are required.

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**Inquiry 28:** 5.1.1 Onboard Components Mobile data computers

Does the operator mentioned here refer to the driver or another person on the bus?

**Response 28:** The Driver.

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**Inquiry 29:** 5.1.1 Onboard Components Bus Network  
What is the purpose of the back office in the garage?

**Response 29:** There is no Backoffice in garages. Buses should be able to use the network in garages to connect the CDS and Backoffice for synchronization purposes.

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**Inquiry 30:** 5.1.1 Onboard Components  
The AVL system requires an onboard component that is not mentioned in section 5.1.1.

**Response 30:** The vendor should provide all the components needed.

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**Inquiry 31:** 5.1.4 3rd Party Integration  
It isn't clear why the location data is associated with 3rd party integration in this section. According to section 5.1.1, the winning bidder is responsible for supplying both the operator consoles and the validators, as well as the CDS tracking data component.

**Response 31:** The only reason is to make sure that the winning bidder will provide an open architecture solution which allows third parties in the future to innovate and build additional services.

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**Inquiry 32:** 5.1.1 Onboard Components  
It is not clear if the mobile data plans for each computer installed in the bus should be provided by the winning bidder.

**Response 32:** All components should be provided. Nothing installed in the buses.

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**Inquiry 33:** 7.2.1 Financial Terms  
Can you clarify the minimum value of bid bond?

**Response 33:** There is not a minimum value of bid bond, the bidder should submit a proposal security (tender bond) for a flat sum of 100,000.000 JD (one hundred thousand Jordanian Dinars) as mentioned in the financial terms.

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**Inquiry 34:** 4.3 Financial Proposal Contents  
Is there a specific format for the financial proposal?

**Response 34:** No, there is not

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**Inquiry 35:** 7.2.2 Legal Terms  
According to page 52: "(the authorization shall be indicated by duly-legalized power of attorney authorizing the execution of such commitment and attached within the technical proposal)"Can you please clarify on this

point? If the joint venture has a Jordanian part, do we still have to legalize the documents from the foreign partner country?

**Response 35:** The proposal shall be signed by the bidder or a person or persons duly authorized to bind the bidder to the contract. The latter authorization shall be indicated by duly-legalized power of attorney. All of the pages of the proposal, except un-amended printed literature, shall be initialed by the person or persons signing the proposal.

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**Inquiry 36:** 7.2.2 Legal Terms

page 52: "stating that if the bid is awarded to the joint venture; each member in the joint venture commits itself to sign the sample joint venture agreement in front of a notary public in Amman, Jordan within (10) calendar days as of the date of award notification and before signing the Contract;" Can the period be extended/waived, since our joint venture partner is based in a country that would require a visa to visit Jordan. Visa might take up to 6 weeks.

**Response 36:** The winning bidder should sign the contract during 14 days starting from the date of notification award, and submit the performance bid and the joint venture agreement before signing the contract.

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**Inquiry 37:** 6.1 Functional Requirements

How many smart card vending machines should be available in the full contract and in the pilot stage? Also how many locations?

**Response 37:** Minimum number of locations: Main terminals and sub-terminals at government universities. See the attached map for the main terminals and sub terminals. Please refer to Annex II (Addendum).

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**Inquiry 38:** 6.1 Functional Requirements

Number of doors per bus. For the pilot stage shall we consider only one door per bus? until a proper survey is conducted?

**Response 38:** Yes.

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**Inquiry 39:** 6.1.1.7 Point of Sale

How many Point of Sale locations will be in the Pilot and in the full contract? Can you also provide the operating hours for the POS locations.

**Response 39:** See responses No. 37 and No. 19 Please refer to Annex II (Addendum)

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**Inquiry 40:** 6.1.2.11 Automatic Vehicle Location System

Can you elaborate on the Bus health monitoring point? How are you currently recording bus health information ? Do you require integration with monitoring kits or solutions?



**Response 40:** Nothing installed on buses. Integration with monitoring solution provided also by the bidder is optional.

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**Inquiry 41:** 6.1.2.11 Automatic Vehicle Location System

PIDs should be included in the proposals? How many PIDs, one for each bus? Also is it part of the pilot phase?

**Response 41:** PID should be included in the proposal for Bus and stations.

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**Inquiry 42:** Section 1 2 BRT systems which are under constructions - Shall these be integrated into ITS system being procured as part of current RFP?

**Response 42:** See Inquiry 23.

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**Inquiry 43:** Section 2.1.2 - What type of tracking devices have been purchased and deployed on the 200 buses by LRTC? -Which company implemented this?

**Response 43:** Nothing.

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**Inquiry 44:** Section 2.2 "Proposed system shall ensure "Compatibility of the clearing house with the existing AFCS in Amman". - What type of AFCS is employed by Amman? -What is its architecture and setup?

**Response 44:** We shall emphasize on the ability of this system to be open. It will be the responsibility of Amman's AFCS to integrate with this system and not vice versa. Therefore, it is important for this system to open, standards based and have clear interfaces through APIs.

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**Inquiry 45:** Section 3.4

The operations shall be limited to technical operations of the system - All support infrastructure like facilities in terminals, depots etc. shall be provided by LRTC

**Response 45:** As in the RFP.

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**Inquiry 46:**

A-Section 5 - Is support for EMV required within AFSC scope?

B- Section 5 - Provisioning of SIMs and telco service charges shall be responsibility of LRTC?

**Response 46:**

A. Supporting EMV is required. The system will start as closed loop but eventually will support both payments types in the future (closed and open). Forward compatibility is a must.

B. See Inquiry 55.

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**Inquiry 47:**Section 5.1.5 - Who is the bus manufacturer?

It's understood that the responsibility of on-board power management shall be on Bus Supplier.

**Response 47:** There is no single specific manufacturer.

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**Inquiry 48:** Section 5.1.5

- Who shall provide Data Center facility (Tier 3) with racks, power, HVAC, LAN etc?
- In case cloud based or co-hosting solution is not recommended as per section 6.3.1

**Response 48:** The Bidder

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**Inquiry 49:** Section 5.2- Can the bidder offer WLAN based on 802.11 ac?

**Response 49:** Yes. However, we expect to have full details of any solution and preferably to be supported by similar projects implementations.

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**Inquiry 50:** Section 5-

- How many garages / depots have been anticipated?
- Who will provide the connectivity between garages and data center?
- Can Data center / control Center be located in the Garage?

**Response 50:**

- See Inquiry 2
  - The winning bidder
  - See Inquiry 2
- 

**Inquiry 51:** Section 6.1.1.1.6

- Who will provide TVMs, CVMs, POS, Kiosks?

It's understood that provisioning of internet at all locations is not under the scope of this RFP, please confirm

**Response 51:** TVMs, CVMs, POS, Kiosks should be provided by the Bidder. Please refer to Annex II (Addendum); Provisioning of the internet at all locations is the responsibility of the Bidder.

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**Inquiry 52:** Section 6.1.1.1.6

- Have Third party retailers been appointed?

If yes what platform HW & SW is being used for cards vending, POS, Kiosks etc?

**Response 52:** No.

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**Inquiry 53:** Section 6.1.1.1.6

-Does this RFP cover the scope of equipping the stops and stations with TVMs, (optional PIDs ref 6.1.2.10.28)?  
If yes, how many stops and stations have been anticipated?

**Response 53:** See response No. 37

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**Inquiry 54:** General –

It's highly recommended to arrange for a Pre-bid meeting by LTRC in order to clarify the RFP queries and allow discussions with stakeholders.

**Response 54:** It may be after tender award decision.

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**Inquiry 55:** Section 6.1.1.1.8

-It's understood that provisioning of SIMs and or telco service charges for 5 years operations shall be borne by LTRC, please confirm.

**Response 55:** No, all SIMs and or other telco charges are the responsibility of the winning bidder.

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**Inquiry 56:** Section 6.1.1.2.4 - Is it required to download blacklists over GSM connectivity?

**Response 56:** No. should be supported but other options are accepted as well.

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**Inquiry 57:** Section 6.1.1.3 - It is understood that client shall provide M2M SIMs with unique APNs

**Response 57:** See inquiry 55

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**Inquiry 58:** Section 6.1.1.3.2- Dedicated links between Data Center are recommended.

**Response 58:** Please consider all options.

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**Inquiry 59:** Section 6.1.1.3.7

-For Vehicle integration, please provide details of vehicles to be used for the project.

**Response 59:** Large and small buses, please refer to Annex 1.

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**Inquiry 60:** Section 6.1.1.6.2

-For Video uploading, is it required to be done through WLAN in garage or over GSM on the move?

-How much storage for central CCTV footage required in Data Center.

**Response 60:** We expect the bidder to consider the two options. Solutions to stream video with constrained connectivity and low bandwidth are now available. However, options to stream video on demand could be an option. A controller watching some routes may ask for video streaming. Uploading video data through WLAN in garage should be supported and data in the Data center should be retained for at least 7 days.

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**Inquiry 61:** Section 6.1.1.6.4

-How many clients / operators are required for control center?

**Response 61:** This should be decided by the winning Bidder based on the survey and analysis phase. From LTRC, 5-10 members are required in the LTRC Control Room should be trained as specified in inquiry 117.

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**Inquiry 62:** Section 6.1.2.4

-Where would the portal & mobile application hosted?

**Response 62:** in the Command Center operated by the Bidder.

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**Inquiry 63:** Section 6.1.2.8

-Who shall provide GIS for all stakeholders?

**Response 63:** It is the bidder responsibility to provide the GIS and route/run data through APIs and make it available to any third-party authorized partner through a REST API. The API will read the data from the CDS tracking data.

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**Inquiry 64:** Section 6.1.2.10

-Please provide complete Bus Network Design with Stops and Stations?

**Response 64:** See the enclosed Map.

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**Inquiry 65:** Section 6.1.2.11.3

-Please identify and provide information on "selected Stops"?

**Response 65:** See Inquiry 64.

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**Inquiry 66:** Section 6.1.2.11.13

-What is the location of CDS operators?

**Response 66:** See Inquiry 117.

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**Inquiry 67:** Section 6.1.2.11.17

-Please identify the sources of Data for this functionality i.e. traffic jam, traffic lights etc.

**Response 67:** This should be provided through an API once applicable. We expect the solution to consider this data once applicable. For design and

testing purposes, the winning bidder can mock the data and identify its format so LTRC can work on providing this API.

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**Inquiry 68:** Section 6.1.2.11.19

-For CAN BUS interface, please provide details of Buses and their makes.

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**Response 68:** See Inquiry 47.

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**Inquiry 69:**

Section 6.1.2.11.21

-Any telco charges related to SMS, MMS, Internet, GSM, Landline calls etc shall be the responsibility of bidder or client?

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**Response 69:** See Inquiry 55.

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**Inquiry 70:** Section 6.1.2.11.26

-Shall we quote for PIDs inside vehicles and stops/stations?

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**Response 70:** Yes

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**Inquiry 71:** Section 6.1.2.11.28

-Please advise the source of infotainment, would this be managed by LTRC?

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**Response 71:** Yes.

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**Inquiry 72:** Section 5.1.5

-Please provide list and location of Bus Stations?

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**Response 72:** See Inquiry 64.

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**Inquiry 73:** Section 6.2.1.2

-Is this a minimum requirement (128 bit)?

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**Response 73:** Yes.

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**Inquiry 74:** Section 6.2.2.13

-How many Fare Gates are required, please share design of stations

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**Response 74:** There are no fare gates. Fare collection is done on board.

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**Inquiry 75:** Section 6.2.5

-What other languages shall be supported?

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**Response 75:** Arabic and English should be supported.

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**Inquiry 76:** Section 6.3.3

-Is cash management in the scope of this RFP?

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**Response 76:** Cash Management is optional. LTRC policy is to minimize or avoid cash transactions, therefore cash should only be considered as fallback plan. Bidders should enable their solutions for cash but it is not required to be implemented at the early stages.

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**Inquiry 77:** 2.2 Objectives and Benefits

-This section refers about AFCS system should be "extendable to an open-loop payment system". This is required with only Jordan Mobile Payments System (JoMoPay) or also other mobile payment systems.

**Response 77:** It is required with JoMoPay and other mobile payment systems

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**Inquiry 78:** 3.2.3 Final Design

-What is expectation from "cutover plan"? This is same as fallback where if Production System fails then operations will be move to backup system.

**Response 78:** We expect high available system, so we expect the winning bidder to provide a recovery site, regular backup and ability of the system to recover from any type of failure without any loss of data or compromise its integrity.

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**Inquiry 79:** 3.4.2 Training

-What is expected number of attendees for training?

**Response 79:** The expected number of attendees for training about (15-20) employees from LTRC and Ministry of Transport (MOT). The training for Bus Operators and drivers is also the responsibility of the Bidder as part of the operational cost.

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**Inquiry 80:** 5 System Design & Architecture

-This is understood from "one wallet with several tickets" that one smart card can have multiple products (Type of Tickets) if yes then how many tickets are expected in one smart card.

**Response 80:** There should be no limit to number of tickets. We here refer to mobile ticketing (e-Wallet) where the rider can purchase multiple tickets, store them on the mobile application and use them where applicable. Bidders should consider the account based ticketing where intelligence is moved from cards and validators to the backoffice.

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**Inquiry 81:** 6.1.1.1 Fare Media

-"Cash" should be used as fare media or as mode of payment to buy fare media. Please clarify expected functionality.

**Response 81:** Please refer to Inquiry 76.

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**Inquiry 82:** 6.2.2 Performance

- Acronyms HFID and PCD are found in this Section. Please provide more details and expected functionalities.

**Response 82:** PCD (Portable Checking Devices) and HFID (Handheld Fare Inspection Device) are the same devices. The HFID should be compatible with all issued fare media specified in TOR document and used to find proof of payment or used as an alternative to existing validators in case of malfunction.

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**Inquiry 83:** 6.3.4 Rider Service

-Please explain in detail "first level support" to rider.

**Response 83:** First level support aims at providing riders with help near vending machines, and inside POS or how to use the fare media at early stages specially for senior people who are used to cash tokens.

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**Inquiry 84:** 6.3.6 Sales Channels

-This section refers "Personalization centers". What are activities which will be done in these centers? Required Hardware and Software for these will be in scope of AFCS Contractor. Are automated ticket vending machines an optional item?

**Response 84:** automated ticket vending machines are not optional. Please refer to Annex II (Addendum)

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**Inquiry 85:** General-Should be the leader of consortium Jordanian?

**Response 85:** No, it is not necessary

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**Inquiry 86:**

General- Does BOT concept applies for this tender ?

**Response 86:** No.

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**Inquiry 87:** 6Annex 1      Annex 1: Routes and Vehicles to be Included in the Pilot- According to Annex 1 number of vehicles included in the scope of implementation & piloting will be total 654 vehicles, please confirm

**Response 87:** Yes.

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**Inquiry 88:** Section 6.2.6 The Supplier should indicate the country of origin of all the equipment of the systems to be supplied

-Are there any restrictions for country of origin for any hardware components?

**Response 88:** The bidder should determine the country of origin, the manufacturer company name, model and any publications related to hardware in his proposal.

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**Inquiry 89:** Section 3.3 Phase 3: Implementation & Piloting- Need to get type and models of vehicles in scope of implementation with number of doors.

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**Response 89:** Large buses: 2 doors.  
Small buses: 1 door.

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**Inquiry 90:** Section 6.1.1.6 On Board Video Surveillance and Recording System (Optional) -  
The required CCTV for monitoring entrance and exits of passengers inside vehicles and driver or all vehicles seats?

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**Response 90:** Provide both solutions.

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**Inquiry 91:** Section 6.1.1.3 Network  
The WiFi available in garages which is routable to the internet can be used to download system updates to vehicles-It's understood that wifi available in garage and no wifi coverage required for the scope of RFP

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**Response 91:** WIFI is not available in garages and should be provided.

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**Inquiry 92:** Section 6.3.5 Card Distribution  
The Bidder shall provide an initial batch of smart cards before the pilot begins.  
-What is the required number of smart cards

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**Response 92:** See Inquiry 19 and Please refer to Annex II (Addendum)

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**Inquiry 93:** Section 6.1.3 Passenger Information System (optional)  
-Are there LED/ digital signage screens required for PIS system at stations and inside vehicles??

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**Response 93:** Yes.

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**Inquiry 94:** Section 6.1.1.5  
Portable handheld ticket validator Inspector Device  
-Need to mention number of required handheld validator

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**Response 94:** Bidder shall provide LTRC with 5 handheld validators in addition to provide sufficient related training

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**Inquiry 95:** Annex 2 Draft Bus Operations Contract for Jerash - Please verify if this contract will be under responsibility of the bidder?

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**Response 95:** The bus operations contract will be signed between LTRC and bus operators. The bidder will be responsible for monitoring the execution of the contracts and report to LTRC.

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**Inquiry 96:** 1. In the 2.2 Objectives and Benefits part RFP says that Automatic Vehicle Location System (AVLS) is an optional system. However in the following parts Automatic Vehicle Location System (AVLS) is completely required. We kindly ask to The Land Transport Regulatory Commission (LTRC) is Automatic Vehicle Location System (AVLS) an optional sub-system or an essential sub-system?

**Response 96:** Automatic Vehicle Location System (AVLS) is mandatory.

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**Inquiry 97:** 2. In the 6.1.1.1 Fare Media and 6.1.1.2 Validators parts the second requirements asks from bidders to support HID and Calypso. However in the 6.1.1.5 Portable Handheld Ticket Validator Inspector Device part, there are no requirement or statement for HID and Calypso

As seen in 6.1.1.5 Portable Handheld Ticket Validator Inspector Device part, it is not possible to support all hardware equipment with HID and Calypso. Therefore, is it possible to remove HID and Calypso requirement?

**Response 97:**

HID cards, also called prox cards, proximity cards & access control cards, are cards that use RFID embedded technology.

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**Inquiry 98:** 3. In the 6.1.1.5 Portable Handheld Ticket Validator Inspector Device part, the requirement asks resistive touchscreen for the portable handheld validator.

We kindly ask to LTRC can the bidder supply this requirement with higher quality capacitive touchscreen?

**Response 98:** Yes. Please provide justifications.

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**Inquiry 99:** 4. In 6.1.1.7 Point of Sale part the 15th requirement asks from bidders to provide laser printer requirement. However the 15th requirement can be provided by thermal printer. We kindly ask to LTRC is it possible to use thermal printer to provide this requirement?

**Response 99:** Yes thermal printer acceptable

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**Inquiry 100:** 5. In 6.1.2.2 Account Management part the 6th requirement asks from bidders to provide 8-digit sequential serial number. The other operators in city use 10 digit serial number. Please approve the possibility of using 10 digits number instead of 8 digits?

**Response 100:** Approved

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**Inquiry 101:** 4. In 6.1.1.7 Point of Sale part the 15th requirement asks from bidders to provide laser printer requirement. However the 15th requirement can be provided by thermal printer. We kindly ask to LTRC is it possible to use thermal printer to provide this requirement?

**Response 101:** Please refer to response 99

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**Inquiry 102:** 6. Integration between the AFC systems currently running in Amman with HID and Calypso is not technically possible. Is it allowed to propose a suitable integration methodology other than Calypso and HID.

**Response 102:** Yes.

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**Inquiry 103:**

Page 6, Table 1: Duration of each component in the Assignment Based on our worldwide experience of operating transit systems in tens of metropolitan cities in 5 continents, the usual roll out timeframe for a fare collection system with similar complexity (account-based ticketing/EMV/ mobile application/Onboard deployment) is in the range of 15 to 24 months according to the number of vehicles and the complexity/number of interfaces.

Are you willing to reconsider the delivery timeframe in order to comply with good practices and ensure a consistent delivery/execution?

**Response 103:** Some flexibility can be provided, as long as it doesn't affect the start of the implementation. See Inquiry 21.

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**Inquiry 104:**

Page 6, Table 1: Duration of each component in the Assignment In order to shorten the project's duration, a different approach could be to phase the project and limit the pilot stage to a smaller functional scope. Is this something you could envisage and what would you consider to be the minimum acceptable perimeter for this scenario?

**Response 104:** We advise the Bidders to comply with the table. However, different innovative approaches to implementation will be studied and evaluated. Also, see Inquiry 103.

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**Inquiry 105:** Page 11, Section 4.1 Timeline

Republication of Tender announcement Technical and Financial proposals are due on September 9, 2019 Can the submit date postponed to October 7, 2019?

**Response 105:** The submission date has been extended to September 19, 2019.

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**Inquiry 106:** Page 12, Technical Evaluation and Criteria

The Detailed Requirements compliance matrix (from page 21 to 49) and the appendixes are not part of the technical evaluation scoring described in chapter 4.4 of the RFP. Can you have the compliance to the technical matrix reincorporated into the assessment criteria?

**Response 106:** The rated criteria in Table 2 / page 12 will be used for all proposals that meets the mandatory technical requirements and has been determined to be substantially responsive to the bidding document. So compliance to the technical matrix is extremely important.

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**Inquiry 107:** Page 13, System Design and Architecture Clearing House

Would the CH require licensing and certification procedures from the Central Bank of Jordan? (YES, NO)

**Response 107:** The CH based on closed loop does not required licensing from Central Bank of Jordan. The licensing and certification procedures from the Central Bank of Jordan is required when the CH will be open loop

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**Inquiry 108:** Page 13, System Design and Architecture If the answer of previous question is YES, the Clearing House (CH) requires licensing and certification from the Central Bank of Jordan.

Q: Please clarify how the CH certification procedure will affect the timeline?

**Response 108:** Please refer to response 107

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**Inquiry 109:** Page 33, Section 6.1.2.7 Clearing House

Q: who owns the <Special Account>?

**Response 109:** LTRC

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**Inquiry 110:** Page 33, Section 6.1.2.7 Clearing House

We understand the fact that the <special account> balance will be negative due to university and under-profit subsidies.

Q: Since the CH Operator will be responsible for settlement of bus operator revenues, please clarify if the Ministry of Finance will guarantee the negative balance? (YES, NO)

**Response 110:** The winning bidder will not be required to guarantee any negative balance.

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**Inquiry 111:** Page 33, Section 6.1.2.7 Clearing House

If the answer of previous question is YES, Ministry of Finance will guarantee the negative balance Q: Please clarify the process of settling negative balances of the <special account> with emphasis on the time / cycle of payments?

**Response 111:** See Inquiry 110. We emphasize that the winning bidder will not carry any responsibility in subsidizing transport operations. Settlement details and technicalities can be discussed during contract negotiations.

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**Inquiry 112:** Page 15, Section 5.1.1 Onboard Components

It is our understanding that cash payments on buses are a requirement of the 1st phase. Will LTRC enforce the removal of one seat from the Coaster buses and the 12-seater buses to fit the cash unit and the validator?

**Response 112:** See Inquiry 76.

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**Inquiry 113:** Page 7, Scope of Work

RFP Documents does not include the winning proposal contract for the operation of the envisaged system. Accordingly, we assume that it is up for negotiation.

If negotiations on the contract fail with the winning tenderer, will LTRC liquidate the tender banking guarantee?

**Response 113:** The proposal security may- at the sole discretion of the tendering committee- be forfeited if the winning bidder fails within the specified time limit to sign the contract.

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**Inquiry 114:** Page 7, Scope of Work

Negotiating the winning tenderer contract could lead to change on the tender conditions. For transparency, will LTRC publish the winning tenderer contract to ensure that the tender conditions have not been altered?

**Response 114:** The contract conditions not differ from the conditions in the tender documents, the payment schedule and the penalties will be agreed during contract negotiations.

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**Inquiry 115:** After publishing the answers, we do expect that the tender will undergo changes due to the bidder's questions. Can you please open the questions one more time?

**Response 115:** No

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**Inquiry 116:** Field Visit

Will there be a bidders meeting in a relevant bus station to clarify a lot of pending field questions?

**Response 116:** No, there are many bus stations, GIS map will be Provided.

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**Inquiry 117:** Command and Control room

There is no mention on the specifications of the Command Center, its location, and how the LTRC will be present there to assume its authority on the bus operators. Please clarify?

**Response 117:** The control room setup and operation are the responsibility of the Bidder. The Control room in addition to running the software modules listed in this TOR with high performance and quality, it should have all the required hardware and software to manage the transactions data, capture and store video data from CCTV, ability to control and monitor and manage all AFCS equipment, manage the communication with field operators and drivers. The bidder shall also have a call center to support riders and field operators and drivers. The Call Centre system shall facilitate passengers to call into for information on bus routes and schedules as well and shall be able to log complaints through call center executive or IVR or online helpdesk system.

The second control room will be hosted inside LTRC. The main functions of this room is to enable 5-10 members from LTRC to ensure the quality of services provided by the Bidder. The main functions of this room are monitoring and reviewing captured data from time to time.

The location of the Bidder Command center shall be identified by the Bidder.

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**Inquiry 118:** What methods are going to be implemented to motivate or enforce the system's implementation and deployment on local operators and bus drivers?

**Response 118:** Deployment of the system will be mandated by law and implemented as part of the operator consolidation process (per article 13 of the passenger transport law). Awareness campaigns for operators will also be used as an incentive. Other ideas that the bidder may have are welcome.

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**Inquiry 119:** Are the fare changes frequent?

**Response 119:** The public transport fare changes yearly based on the fuel prices and inflation rate and every 2-3 years for general fare policy changes.

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**Inquiry 120:** Buses connectivity throughout the route shall require a 4G network? Is it mandatory? Or we can rely on data collected in WIFI networks in the main stations and depots.

**Response 120:** Bus connectivity throughout the route is mandatory.

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**Inquiry 121:** 6 payment methods is pretty complicated, is it mandatory or can be postponed to later phases?

**Response 121:** According to item 2 under 6.1.1.1, five methods are required (bank cards are required at a later stage).

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**Inquiry 122:** Is it mandatory to have watermarks on the videos and images of the surveillance systems?

**Response 122:** Watermarks are required.

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**Inquiry 123:** is the "WiFi for Passengers" necessary?

**Response 123:** No.

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**Inquiry 124:** how many cameras in the bus?

**Response 124:** See Inquiry 90.

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**Inquiry 125:** Video content upload on daily, could it be weekly?

**Response 125:** Yes. But the final decision should be taken in the design phase.

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**Inquiry 126:** readings for fuel and vehicle temperature; is it done by the vehicle manufacturer systems that we need to rely on or we have to install our own systems?

**Response 126:** Existing vehicles have no installed devices. This is required from the vendor as part of the AVL solution

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**Inquiry 127:** please give more explanation for the Calypso standard card

**Response 127:** See response on inquiry 130.

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**Inquiry 128:** "5.2 Financial transaction standards: cardholder information, transaction amount and transaction type in full compliance with the Central Bank of Jordan rules and regulations regarding e-payment systems and payment service providers communication protocols, transmission frequency for contactless fare cards (ISO 14443) and NFC (ISO 18092:2013)." Please provide the repalted document

**Response 128:** This is only required for an open loop system. See Inquiry 107.

---

**Inquiry 129:** "6.1.1.2

The validators should include contactless smart card reader that supports reading of all ISO 14443

type A and B compliant card formats (e.g., the entire MIFARE product line) and HID 15693 cards, 2-4 SAM ISO7816 sockets for ID000 Format (SIM-Card), support for MIFARE classic, MIFARE DESFire, MIFARE Plus, Calypso and EMV compliant" please give more explanation for the Calypso standard card

**Response 129: Calypso** is an international electronic ticketing standard for microprocessor contactless smart cards, originally designed by a group of transit operators from 11 countries including Belgium, Germany, France, Italy, Latvia, Portugal, Canada and others. It ensures multi-sources of compatible products, and allows for interoperability between several transport operators in the same area.

The main difference that Calypso standard brought is that the card has some processing capabilities. Most important is to make sure that the suggested cards, validators and inspectors for an Account Based Ticketing are:

1. Compatible with ISO related standards
2. Are designed for interoperability [vendors should show how this is supported]
3. Has low issuance costs
4. Secure.
5. Provide a solution for offline validation [hotlists, risk management,]

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**Inquiry 130:** "6.1.1.6

The Vendor shall provide a proposal to install Onboard Surveillance System on existing buses. Current buses has no onboard surveillance system . The Bidder shall provide specifications for

- ☐ CCTV Cameras
- ☐ Mobile DVR/NVR (CCTV management, storage of recording)
- ☐ Installation fees on buses"

"How many cameras in each bus  
and the camera location in each bus

**Response 130:** See Inquiry 90.

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**Inquiry 131:** "6.1.3

The PIDs shall display:

- ☐ Traffic related messages such as:
  - o bus traffic status,
  - o bus direction for PIDs installed on platforms,
  - o bus frequency/theoretical time between 2 buses for rush hours, o bus schedule for periods of low traffic, o delay information,
  - o commercial information,
  - o service disturbance, partial service when incidents/accidents/special events occur,
  - o service interruption, including service not started or end of service.
- ☐ Current time (interfaced with Clock System) through a digital clock inserted in PIDs"

- "1、 Does commercial information include picture or video information ?
- 2、 Could please provide the size of the PID , how many characters will display ?
- 3、 What kind of installation type ?

**Response 131:**

Display Screen on Bus Stations/ Terminal Points and some important Bus Stops  
Technical Requirement

- LED Technology: SMD
- Matrix Format: Line Matrix
- LED Color: Amber
- Pixel Pitch: 6mm
- Viewing Angle (H/V): 120o/120o
- Brightness: >6000cd/m2
- Lines: 2
- Line Resolution: 128x7 pixels
- Characters per Line: 21
- Brightness Control: 16 levels (automatic or manual)
- Mechanical: Aluminum
- Sides: Single Side, Angled Front Face
- Service Access: Front access with swing door
- Front Screen: Anti-reflective security glass
- Protection: IP54
- Color options according to RAL standards
- Communication Interfaces: Ethernet, GPRS
- Operating Temperature: -20oC to +60oC
- Humidity: up to 95% RH
- LED Lifetime >100.000h
- Power Supply: 230 VAC/50 Hz
- Compliance: CE
- All such outdoor equipment shall be equipped with automatic system alarm for security reasons.

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**Inquiry 132:** "6.2

The software and database structures for the CDS will have the capacity to support:

- ☐ Garage Communications Servers. ☐
- 1000 Validators.
- ☐ 250 bus stations.
- ☐ 25 HFID
- ☐ 50 Points of Sale.
- ☐ 1 Maintenance Test Station.

"1, how much for the exchange for card per day

2, left part is the product list ?"

**Response 132:** The question is not clear.

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اسماء الشركات التي قامت بشراء العطاء الخاص رقم ٢٠١٩/٢/لوازم خاصة  
Design, Implementation, and Operation of an Intelligent Transportation System (ITS) for Public  
Transportation in Jordan

الرقم	اسم المناقص
١	شركة صيوان للاستثمار والتجارة وتطوير المشاريع Microelektronika spol Sunbay BV PPT excellence 4 top GMBH
٢	شركة ميونخ لخدمات الاتصالات Kent kart
٣	شركة سلطان ابو حسان وشريكه Amco
٤	شركة الخدمات الفنية للكمبيوتر
٥	الشركة الالية لتكنولوجيا المعلومات
٦	شركة الهياكل الذكية للتكنولوجيا sitech
٧	شركة نافذ للخدمات اللوجستية
٨	شركة تقنية تبادل الشبكات
٩	الشركة الاردنية لخدمات تراسل المعطيات
١٠	ائتلاف شركة دار العمران Dornier consulting international Inmotion
١١	شركة Kapsch TrafficCom AG
١٢	شركة البتراء الاردنية للاتصالات المتنقلة
١٣	شركة مائة وواحد لتسويق وبيع البرامج التلفزيونية عبر الانترنت APPMAKERS TECGNOLOGYS
١٤	الشركة المتكاملة للبطاقات الذكية
١٥	شركة BPC AG
١٦	شركة الائتلاف للاستشارات الهندسية
١٧	شركة mobisis
١٨	الشركة المتكاملة للنقل المتعدد
١٩	الشركة المتقدمة للاستشارات
٢٠	شركة البرمجيات المتقدمة
٢١	شركة رؤية عمان الحديثة للنقل

