EUROPEAN UNION

Delegation of the European Union to Bosnia and Herzegovina

Clarification No.1 to the Tender Dossier

Publication Ref: **Europeaid/139 924/DH/SUP/BA;**

Tender no: **EC/BiH/TEN/17/017**

Project title: **Provision of an Automatic License Plate Recognition System at the BIH Border Posts, Western Balkan – Bosnia and Herzegovina**

Question 1:   Since one of objectives of this project is to improve and upgrade existing border crossing application, will contracting authority provide source code and other technical documentation of the border crossing application necessary for such upgrade?

Answer 1:   Source code and all available technical documentation will be provided **at the Border Police Headquarters (Sarajevo) only**, **will not be allowed to leave Headquarter of Border Police BiH**, and can only be accessed at Border Police premises.

Question 2:   In tender documentation it is stated: "Development will be done on the test model of Border Checks Application. It will be provided by BP BiH. Remote access to BP BiH in any means will not be allowed." Does this mean:

    a)   All development needs to be done on BP BiH premises, or

    b)   Contractor can perform development in own offices, but test model of Border Checks Application will only be available on BP BiH premises, and all testing/integration/verification needs to be performed on BP BiH premises?

Answer 2:   As stated in the tender documentation, due to the sensitivity of the system itself and the confidentiality of the data, remote desktop connection will not be allowed to any Border Police System, including a test model. The upgrading of the existing system and the implementation of new functionalities must be performed at the Border police Headquarter premises (Sarajevo) with the constant supervision of authorized persons. The Border Police will provide everything that is needed for the implementation (workspace, network, access to servers, access to external systems, etc.).

Question 3:   In accordance with the Regulation (EU) No236/2014; Article 10; impossibility to procure certain elements of the contract from the eligible countries as defined in the TD; and the fact that neither of the items exceeds €100.000 in value, we have the following question:

    Would it be acceptable to offer the following items of non-EU/IPA II origin?:

    Item 1.3 - Network Switch 1

    Item 1.4 - Network switch 2

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Page **1** of **9**

Item 1.5 - Network switch 2

Item 1.6 - Monitor

Item 1.7/PDU

Item 1.9 - RJ45 connector

Answer 3: Rules of origin for the project in subject are defined in point "8. Eligibility and rules of origin" of the Contract Notice and point "4. Origin" of the Instructions to Tenderers.

Please note that the EUR 100,000.00 non-EU/IPA II origin rule applies to the estimated value of a lot as a whole and not to value of item(s) within the lot.

Question 4: Technical documentation "06) ALPR_Documentation FINAL 139 924" page 9, states that "Automatic Licence Plate Recognition, improvement and upgrade of the Border checks application and integration of Business Intelligence (BI) solution for advanced reporting" (hereinafter PROJECT) includes installation on international crossing points in all lines for motorcycles, motor vehicles, trucks and buses".

Does this mean that different types of border crossings will have different types of screens? Specifically, whether the screen for airports will be different from screens for border crossings that are subject of the this project or there will be two applications, one for airports and the other for border crossings which are subject of the ANPR project?

Answer 4: Depending on a type of border crossing (land, air), a different form for border checks will be displayed to the end user (border police officer).

Question 5: Technical documentation "06) ALPR_Documentation FINAL 139 924" page 9, states that "PROJECT should provide control and record of motor vehicles' crossings with relevant data on crossing such as photo of the vehicle, a string of alphanumeric characters that describes a vehicle (type, brand, producer, green card / international insurance policy, chassis number, engine number, registration expiring date, trailer registration plate number and etc.)".

How is it planned (manually or automatically) to enter data of vehicle type/brand, green card, and other? Does this data entry refer to domestic or foreign vehicles?

Answer 5: Data entering will be performed automatically where web services from other institutions are available (e. g. IDDEEA vehicle data) with the possibility of manual correction and input of such data. This data refers to domestic vehicles only.

Question 6: Technical documentation "06) ALPR_Documentation FINAL 139 924" page 9 item 3, Objectives, states that "Border checks application should be modernized in all technological aspects; assure high availability of application part, eliminate SPOF in all segments where it is technically possible, optimize current reporting system and provide advanced reporting system based on BI solution, improve logging system, integration of MIND system (backup option for FIND system; web service regarding documents check), eliminate bottlenecks/incompleteness in the current system and upgrade it with new registers, provide new functionalities, keeping the current interface of the Application and its entire modularity, in order to add a new fields".

6 (a) - What is meant by optimization of the existing reporting system? What will be the relation between the existing reporting system and the BI solution required for this project? Can you provide us with the description of the existing reporting

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Page **2** of **9**

system in terms of quantity of data (approximately number of rows in biggest tables) and projection of the amount of data over the next 5 years, the promptness of data in the reporting system (time frame of transferring data into the reporting system, ie. once a day or every few minutes), the current and desired time to generate the report?

Answer 6a: Optimization of the existing reporting system includes optimization of all Operational-Reports, while DWH/BI system must contain and will be used for all Statistical-Reports. In accordance with this requested DWH/BI system must be developed and the existing reporting system must be optimized. Regarding the amount of data, within the existing reporting system or Data which will be within the required DWH/BI system in individual tables used for Operational-Reports, currently there is more than two billion records and it is expected to grow with the implementation of the ALPR system. The projection should be set at approximately 9 billion records. The updating of Operational-Reports must be in real time with a maximum delay of 8 minutes and maximum delay of 60 minutes for Statistical-Reports.

The current time for Operating-Reports generation varies from 3 to 15 seconds. Required time for Operational-Reports generation, for the projected number of records in the next 5 years, must be within 4 seconds at any time. The current time for generating Statistical-Reports is within time frame of 10 to 30 seconds and required time must be under 10 seconds at any time.

6 (b) - To what bottlenecks/incompleteness, mentioned in the document, are related to? To optimize database, application code, or web service calls to third parties or systems?

Answer 6b: Bottleneck elimination refers to:

- Optimization of all databases,

- Archiving of data that cannot be changed,

- Optimizing of all database queries or Web services queries,

- Border Checks Application code optimization in terms of loading Form speed (for checks, records).

Question 7: Technical documentation "06) ALPR_Documentation FINAL 139 924" page 10 item 3, Objectives, states that "Results that need to be achieve: Improvement of the Application logging system".

Which system user actions (data entry, data modification etc.) are stored or logged? Do you only need to store or log access to the system, or besides that all inserts and updates/modifications to the data as well as which user has seen which data and when did he see it?

Answer 7: All user actions need to be logged, especially modification that are made on the Data. User activity, such as which user with the exact time has accessed the Data and query input and results need to be logged.

Question 8: Technical documentation "06) ALPR_Documentation FINAL 139 924" page 11 Chapter I, states that "Development will be done on the test model of Border Checks Application. It will be provided by BP BiH. Remote access to BP BiH in any means will not be allowed".

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Page **3** of **9**

Is it possible to get source code of the current system, database scheme (without the data) of the current system, and take it out from the Border Police premises in order to do certain part of the software development at the Bidder's location? Is it possible to access to the aforementioned test environment from one of the field offices or access to all of them (test environment, production environment, source code, database....) is possible only from the Head Office in Sarajevo?

Answer 8: Source code and all available technical documentation will be provided **at the Border Police Headquarters (Sarajevo) only, will not be allowed to leave Headquarter of Border Police BiH**, and can only be accessed at Border Police premises.

As stated in the tender documentation, due to the sensitivity of the system itself and the confidentiality of the data, remote desktop connection will not be allowed to any Border Police System, including a test model. The upgrading of the existing system and the implementation of new functionalities **must be performed at the Border police Headquarter premises (Sarajevo)** with the constant supervision of authorized persons. The Border Police will provide everything that is needed for the implementation (workspace, network, access to servers, access to external systems, etc.).

Question 9: Technical documentation "06) ALPR_Documentation FINAL 139 924" page 11 Chapter I "Border Checks Application is centralized, i.e. the whole server infrastructure is located at HO of BP BiH in Sarajevo. Border Checks Application is used at 57 IBCP. At the moment, 198 stationary and 9 mobile travel documents readers are functioning, with a possibility to read biometric travel documents. Border Checks Application is developed modularly, and since its establishment it was upgraded several times with modules based on users' needs, law framework changes and necessary software updates (OS version, DB version,..)".

Does the mobile biometric travel documents readers use an existing application\system or is it a separate mobile application? In the case of a separate mobile application for mobile readers, does this mean that functionalities related to the upgrading of the existing system must be implemented in this separate mobile application (i.e notification system) and whether the required licence plate-related functionalities should be implemented in that separate mobile application?

Answer 9: Mobile travel document readers used with specialized tablet devices (Windows 10 Pro) use a separate mobile store application that is closely integrated with the existing Web Based application and together make the overall system for Border Checks. Functionalities that are related to ALPR are not necessary to implement within the mobile store application, but it is necessary to adapt all upgrades and modifications of the existing system to the mobile store application (notification system implementation is mandatory for Mobile Store Application).

Question 10: Technical documentation "06) ALPR_Documentation FINAL 139 924" page 23, Chapter Chapter I item 7.5 Technical solution - Software "During implementation, keeping of all current functionalities of system must be retained".

Does this mean that the Bidder chooses whether to work on upgrading the current system or implementing a new system that has all the functionalities of the current system with all the upgrades required by this project?

Answer 10: Tenderer can choose whether to work on upgrading of the current system or developing/implementing a new system. It is crucial that all existing functionalities,

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Page **4** of **9**

screen layout, database structure and performance is retained, tested and be fully operational. The existing system infrastructure must be used without additional costs to Border Police of Bosnia and Herzegovina. If the tenderer chooses development of a new system, all existing functionalities must be implemented, tested and released into production system before the implementation of the ALPR module is started. By this it is meant that a new developed System must be identical to the existing system before ALPR module can be developed.

Question 11: Technical documentation "06) ALPR_Documentation FINAL 139 824" page 23, Chapter I, item 9, Testing of the system "After successful testing on test platform with test data, continuous testing for the period of 15 days will be performed on production platform with production data at a certain border crossing point".

Does this mean that at one point there will be one production database (upgraded current version of the database) and two production applications (current version and upgraded version with license plates functionalities) or within the upgraded version there will be two forms for person and vehicle checking (existing form for persons and upgraded form with persons and vehicles)? Also when setting up a new versions of the application to production environment, what is the maximum application downtime and in which period of the day or night is allowed to setting up new versions of the system to production environment?

Answer 11: At one point in the production environment there can be only one production application and database. When setting up new versions of the application to production environment, maximum application downtime cannot be more than 15 minutes and all delays must occur in strictly controlled conditions, when the frequency of people and vehicles at the crossing points is lowest (in the time frame between 01:00 AM to 04:00 AM).

Question 12: Technical documentation "06) ALPR_Documentation FINAL 139 924" page 36, Chapter II, item 13.1 Data source "Data Source includes Border Checks Application, Database: SQL server 2014".

Does this mean that there is one database on SQL Server 2014 or there are multiple databases that will be the data source?

Answer 12: There are multiple databases that will be used as the source of data, and all are SQL server 2014/2016 (transaction database, archive database....). BI system, besides SQL, should have the ability to use other data sources, in accordance with the tender documentation.

Question 13: Technical documentation "06) ALPR_Documentation FINAL 139 924" page 38, Chapter IS, item 13.3. ETL and DQ processes "Data in data storage is uploaded automatically in a defined period (for example once per day during the night) and being processed into multidimensional database after that".
Does this mean that data transfer is done once a day?

Answer 13: It does not mean that that data transfer is done once a day, given time period is just used as an example. The updating of Operational-Reports must be in real time with a maximum delay of 8 minutes and maximum delay of 60 minutes for Statistical-Reports.

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Page **5** of **9**

Question 14: Technical documentation "06) ALPR_Documentation FINAL 139 924" page 45, Chapter II, item 13.12. System implementation "Ad-hoc reporting: Creation of necessary cubes for the purpose of ad- hoc reporting".

What is the approximate number of data cubes that needs to be implemented?

Answer 14: The exact number of cubes will be defined after the analysis is completed. Regardless of the final number of implemented cubes, all available data for reporting must be included and taken into consideration, and that Data shall be divided to cubes based on their relation, in order to provide end user with the best analytic results. Border police reserves the right to determine the exact number of cubes.

Question 15: Technical documentation "06) ALPR_Documentation FINAL 131 924" page 12, Chapter I "Block diagram of the Application:"

The above mentioned schema\block diagram shows the data replication server for the ISM. What is the correlation between the existing system in the Border Police and the ISM system and in which way this replication has been implemented? Will the upgrade and implementation of the license plates\ANPR system within the existing Border Police system, affect the above mentioned replication, and if the answer is yes, are these changes covered by this project?

Is the Border Police system, alongside ISM system, source of data for some other systems on which this project may have an impact and whether the modifications to these systems/applications are covered by this project?

Answer 15: The current system (Border Checks) of the Border Police of Bosnia and Herzegovina is one of the data source for the ISM system. Upgrading of the existing system (Border Checks) will affect the replication of data to the ISM system (the exact scope of work will be known after a detailed analysis has been completed). It is also important to note that there is a two-way communication between the Border Police system and the ISM system, relating both travellers and vehicles. At some point, the border police system is the source of data/information for the ISM, while in certain situations the ISM system is a data source for the Border Police System.

Besides the ISM system, there are other systems for which the Border Police System is providing data to. ROS system is one of them (Register of Certain Foreigners), and the changes and modifications to ROS are covered in this project (the exact scope of work will be known after a detailed analysis has been completed).

Question 16: Technical documentation "06) ALPR_Teh_Spec - Final 139 124", page 2, item 1.1 improvement of Border Checks Application and Database "User web-interface optimization".

What is considered by optimizing the web interface?

Answer 16: By optimizing the web interface it is meant that all necessary corrections on the existing system need to be done in order to improve the performance of the system. Depending on the detailed analysis results, the optimization may be done at client side, server side and/or Database side. It is important to note that the optimization of the web interface is applied to all modules within the existing system.

Question 17: Technical documentation "06) ALPR_Teh_Spec - Final 139 124", page 2, item 1.1 Improvement of Border Checks Application and Database "Improvement of the loading speed".

What is considered by improvement of the loading speed?

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Page **6** of **9**

Answer 17: By improving the loading speed, all the necessary corrections and upgrades on the existing system need to be taken in consideration in order to improve overall system performance. Namely, the time of the border checks that are made in internal records, in the existing system, varies from 1 to 10 seconds depending on the system load. After the load speed is improved it is expected, the internal checks execution time shall not be over 3 seconds, regardless of system load. Also, if some of the checks (internal or external) stop working, the application itself should not be affected by it and the duration of other checks (travelers and vehicles) must not slow down.

Question 18: Technical documentation "06) ALPR_Teh_Spec - Final 139 924", page 5, item 11 Improvement of existing System "Maintenance within warranty period"

During the warranty period (under the described conditions) can support be provided with remote access without personal presence?

Answer 18: No, during the warranty period support cannot be performed using remote access. The support shall be provided at the Headquarters of Border Police of Bosnia and Herzegovina (Sarajevo).

Question 19: Item 1.13 Flexible PVC pipe

Technical specification for this Item states:

• Waterproof

Considering that manufacturers of these types of pipes in their technical documentation do not explicitly mention that the flexible PVC pipes are waterproof but there are referring to the appropriate EN standards, please consider to change this request in accordance to IEC (International Electrotechnical Commission) standards for cable management i.e. IEC EN 61386 standard or appropriate EN standard which flexible PVC pipes should support.

Answer 19: **See corrigendum n.1 to the Tender Dossier.**

Question 20: Item 1.9 RJ45 connector and item 1.21 Wiremold:

Is it necessary for these items to be EU origin, as prices for these items are negligible and they could be considered as small consumables?

Answer 20: All supplies under this contract must originate from a Member State of the European Union or an eligible country or territory as defined under the Regulation (EU) No 236/2014 establishing common rules and procedures for the implementation of the Union's instruments for external action (CIR) for the Instrument for Pre-accession Assistance (IPA II). Please also see Answer 3.

Question 21: Items 1.8 Network cable, Item 1.11 Power cable and Item 1.12 Ground/earth wire

Technical specification for this Items states:

- Outdoor
- UV resistant

Considering that this cables (items 1.8,1.11 and 1.12) will be installed inside wiremolds and pipes and therefor protected from external influences (rain, snow

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Page **7** of **9**

etc.) and protected from direct exposure to the sun, please consider removing this request from technical specification for items 1.8,1.11 and 1.12?

Answer 21: The minimum requirements for items 1.8, 1.11 and 1.12 remain in accordance with the technical specifications.

Question 22: Item 119 Junction Box

Technical specification for this Items states:

"Size: min. 300x200x **150** mm(HxWxD)-max. 350x250x200 mm (HxWxD)"

Considering that dimension of Junction box depends on equipment that will be installed into box, is it acceptable to offer Junction Box with dimensions min. 250 x 200 x 100 mm (H x W x D) - max. 350 x 350 x 200 (H x W x D) while making sure that the offered equipment (Item 1.3, Item 1.10 etc.) has to fit in the box?

Answer 22: **See corrigendum n.1 to the Tender Dossier:**

"Size: **min. 250** x 200 x **100 mm** (H x W x D) **– max.** 350 x **350** x 200 mm (H x W x D), **Note: Tenderer must ensure that the offered equipment (Item 1.3, Item 1.10 etc.) will fit in the offered junction box with the extra space left for at least two circuit breakers."**

Question 23: Item 1.3 Network Switch 1 and item 14 Network Switch 2

Technical specification for this Items states:

"Type: Industrial, fanless"

Considering that most of the leading network manufacturers use terminology "industrial" for equipment that has no moving parts (i.e. fans) and considering that most of them doesn't explicitly state "fanless" In datasheets, please consider to change this request to "Type: Industrial or fanless"?

Answer 23: The tenderer should offer industrial switches with passive cooling (no moving parts – fans).

Question 24: Item 1.21 Wiremold

Please define Wiremold dimensions?

Answer 24: Please note that it is the responsibility of tenderers to offer wiremold of dimensions that will be adequate for the intended use.

Question 25: 56 border cross point, numbers to be matched (42 site listes in Excel file, 213 ALPR cameras listed in requirement document).

Answer 25: The Application is centralized, i.e. server infrastructure is located at the Head Office of Border Police of BiH in Sarajevo and it is used at 56 border crossing points (land, airport, rail, ports).

ALPR cameras will be installed at 42 land border crossings (213 lanes).

Question 26: The implementation period is 365 days, from commencement order to provisional acceptance, including 90 days of trial period.:

a) 90 days which kind of test? PoC in normal condition?

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Page **8** of 9

b) 90 days trial are included in 365 days or before?

c) Does implementation period mean period to deploy all cameras?

d) Will we apply Agile 2-3weeks sprint to 365d period or to trial or both?

Answer 26 (a): 90 days means trial/test of overall system. During this period, all arising problems need to be resolved and the system needs to be fully operational and functional.

The testing period of 90 days is explained in the technical documentation (ALPR_Documentation FINAL 139 924.docx, point 9. Testing of the system pages 30/31).

Answer 26 (b): The trial period of 90 days is included in 365 days.

Answer 26 (c): The 365 days is the period for implementing all required activities, in accordance with the technical documentation, including the trial period of 90 days. The cameras need to be deployed before the trial testing/period of 90 days.

Answer 26 (d): The Agile 2-3 weeks sprint applies to development and not to the trial period.

Question 27: List of border crossing point, for each point we need to know:

- How many lanes/direction in order to decide 1-2 lanes camera
- final count on camera installation point with lane width and height.
- General description for the pole available (N° 157 system pole 2mt + N°23 guardrail barrier 0,5 mt) but not matching with ALPR number

Answer 27: - 213 cameras – 213 lanes;

- One camera per lane;

- 213 ALPR cameras need to be installed. The position of camera mounting will not be the same at every Border Crossing, and the camera position on each lane will need to be set so the OCR of license plates will provide the best possible results;

- Guardrail barrier will be installed only on certain border crossings;

- In some cases one pole will be used to mount 2 cameras and on some border crossings the poles are already installed.

Question 28: Training - Training on camera installation and configuration can be done with agreement on Travel and Accomodation cost.

Usually 1 day training is sufficient for ANPR camera basing on User Manual.

Integration of the camera is easy and configurable with several formats.

Answer 28: The selected tenderer is obliged to provide training in accordance with the technical documentation (ALPR_Documentation FINAL 139 924.docx, point 10. Training of users (for ALPR) (pages 31-33) and point 13.15. Training (for BI) (page 47).

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Page **9** of **9**