

Offer form (F3.1)

Date of submission of the offer: "18" June 2021

Procurement procedure No. : ocds-b3wdp1-MD-1615975211331

Participation notice No.: for the procurement of Instant payments software solution by open tender

To: National Bank of Moldova

[full name of the contracting authority]

Forbis Solutions, Ltd

declares that:

[name of the tenderer]

a) They have been examined and there are no reservations regarding the award documents, including modifications no.as of 26/03/2021, 08/04/2021, 12/04/2021, and 19/04/2021.

[enter the number and date of each modification, if any]

b) Forbis Solutions, Ltd

undertakes

[name of the tenderer]

to supply/provide, in accordance with the award documents and conditions stipulated in the technical and price specifications, the following goods of software and services for Instant payments system.

[enter a brief description of the goods]

c) The total amount of the offer without VAT constitutes:

5,990,000 (five million nine hundred ninety thousand) EUR.

[enter the price per batches (where applicable) and the total offer in words and figures, indicating all the respective amounts and currencies]

d) The total amount of the offer with VAT constitutes:

5,990,000 (five million nine hundred ninety thousand) EUR (VAT does not apply)

[enter the price per batches (where applicable) and the total offer in words and figures, indicating all the respective amounts and currencies]

e) This offer will remain valid for the period specified in the **PDS3.8.**, starting with the deadline for submission of the offer, in accordance with the **PDS4.2.**, the offer will remain mandatory and may be accepted at any time until the expiration of this period;

f) In case of acceptance of this offer, Forbis Solutions, Ltd,

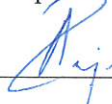
[name of the tenderer]

undertakes to obtain a Performance Guarantee in accordance with **PDS6**, for the proper execution of the public procurement contract.

g) We are not in any conflict of interests, in accordance with point, in accordance with Article 79 of Law no. 131 of 03.07.2015 on public procurement.

h) The signatory company, its affiliates or subsidiaries, including each partner or subcontractor that are part of the contract, have not been declared ineligible based on the provisions of the legislation in force or based on the regulations with impact on the field of public procurement.

Signed: _____



Name: Anton Zujev

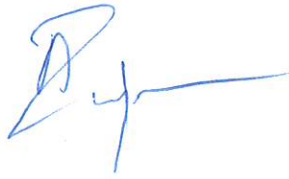
In the capacity of: Director,

[official position of the person signing the offer form]

Tenderer: Forbis Solutions, Ltd

Address: Langdale House, 11 Marshalsea Road, London, SE1 1EN

Date: '18" June 2021

A handwritten signature in blue ink, consisting of a stylized initial 'F' followed by a horizontal line and a vertical stroke.

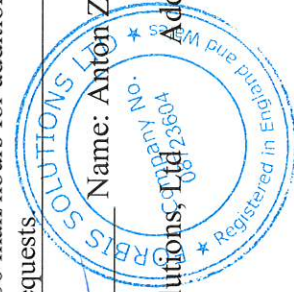
TECHNICAL SPECIFICATIONS (F4.1)

[This table will be completed by the Tenderer in columns 4, and by the Contracting Authority – in columns 1, 2, 3, 5]

| | |
|---|--|
| Tender number: ocds-b3wdp1-MD-1615975211331 of 19 June, 2021 | |
| Tender name: The procurement of instant payments software solution (licenses, implementation services and warranty services) | |

| CPV Code | Name of the goods/services | Technical complete required specification | Technical complete offered specification | Standard reference |
|---|---|---|---|--------------------|
| 1 | 2 Goods | 3 | 4 | 5 |
| Lot: The procurement of instant payments software solution (licenses, implementation services and warranty services) | | | | |
| 48422000-2 | Licenses for the software solution for an Instant payments system (IPS), including one year of standard support from the manufacturer | According the detailed technical conditions described in Chapter IV - (Specification and requirements (F4.4)) | According the detailed technical conditions described in Chapter IV - (Specification and requirements (F4.4)) | n/a |
| 72212422-3 | Implementation services for IPS | | | n/a |
| 79633000-0 | Training services related to solution | | | n/a |
| 72267000-4 | Warranty services (maintenance and support) for IPS. | | | n/a |
| 72212422-3 | 300 man/hours for additional development and change requests. | | | n/a |

Signed:  Name: **Anton Zujev** Position: **Director**



Tenderer: **Forbis Solutions, Ltd** Address: **Langdale House, 11 Marshalsea Road, London, SE1 1EN**


PRICE SPECIFICATIONS (F4.2)

[This table will be completed by the Tenderer in columns 5, 6, 7, 8, and by the Contracting Authority – in columns 1, 2, 3, 4, 9, 10]

| Tender number: <i>ocds-b3wdp1-MD-1615975211331</i> of 19 June, 2021 | | | | | | | | | |
|---|---|---------|--|--|-----------------------|--|--|--|------------------------------|
| Tender name: <i>The procurement of instant payments software solution (licenses, implementation services and warranty services)</i> | | | | | | | | | |
| CPV Code | Name of the goods/services | Units | Quantity | Unit price (without VAT) | Unit price (with VAT) | Amount (without VAT) | Amount (with VAT) | Deadline for delivery | Budget classification (IBAN) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Goods | | | | | | | | | |
| Lot: The procurement of instant payments software solution (licenses, implementation services and warranty services) | | | | | | | | | |
| 4842 2000- 2 | Licenses for the software solution for an Instant payments system, including one year of standard support from the manufacturer | license | * Will be determined in the tender process | 2,100,000 (two million one hundred thousand d) EUR | N/A | 2,100,000 (two million one hundred thousand d) EUR | 2,100,000 (two million one hundred thousand) EUR | Deadline for delivery: According to the needs of implementation, but recommended no earlier than finalization of design specifications and no later than final system acceptance. <i>*The licenses and one year of standard support from the manufacturer will become active from the date of the final acceptance of the solution.</i> In case of activation of licenses until the date of acceptance of the solution, all costs imposed by the licensee during the implementation phase will be borne by the Tenderer. Detailed technical conditions are described in the Chapter IV - Specifications and requirements (F4.4). | |
| 7221 | Implementation services | service | 1 | 3,558,0 | N/A | 3,558,0 | 3,558,00 | Deadline for delivery: | |

| | | | | | | | | | |
|--------------|---|-----------|-----|--|-----|---|--|--|--|
| 2422-3 | | | | 00 (three million five hundred fifty-eight thousand d) EUR | | 00 (three million five hundred fifty-eight thousand) EUR | 0 (three million five hundred fifty-eight thousand) EUR | - no more than 20 months (since the start of the project until the final acceptance of the solution); Detailed technical conditions are described in Chapter IV - Specifications and requirements (F4.4) Note: In order to ensure efficient implementation, the contracting authority reserves the right to postpone the launch phase (Go-live) for a period of up to 3 months. | |
| 7963 3000-0 | Training services related to solution | service | 1 | 44,000 (forty four thousand d) EUR | N/A | 44,000 (forty four thousand d) EUR | 44,000 (forty four thousand) EUR | In accordance with detailed technical conditions that are described in Chapter IV - Specifications and requirements (F4.4) | |
| 7226 7000-4 | Warranty services (maintenance and support) | month | 12 | 22,500 (twenty two thousand d five hundred) EUR | | 270,000 (two hundred seventy thousand d) EUR | 270,000 (two hundred seventy thousand) EUR | In accordance with detailed technical conditions that are described in Chapter IV - Specifications and requirements (F4.4). During 12 months from the date of final acceptance of the system | |
| 7221 2422-3 | Man/hours for additional developments and change requests | man-hours | 300 | 60 (sixty) EUR | | 18,000 (eighty thousand d) EUR | 18,000 (eighty thousand) EUR | Additional developments and change requests will be counted through man-hours work effort and will not exceed the volume of 300 hours and will be paid according to the actual volume requested. | |
| TOTAL | | | | | | | 5,990,000 (five | | |

| | | | | | | | | |
|--|--|--|--|--|--|--|---|--|
| | | | | | | | million nine hundred ninety thousand) EUR | |
|--|--|--|--|--|--|--|---|--|

Signed:  Name: Anton Zubev Position: Director
Tenderer: **Forbis Solutions, Ltd**
Address: Langdale House, 1 Marshalsea Road, London, SE1 1EN



THE STRUCTURE OF THE FINANCIAL PROPOSAL (F4.3)

1. Table: Staff category cost

[Staff category cost – it includes effort and fees for categories of staff in the team proposed by the tenderer, according to the grouping proposed. One category will necessarily be project management. Please indicate the categories of personal and effort / fees for each category, including the proportion of fieldwork (at the NBM headquarters). All amounts will be expressed in EUR / MDL / USD, depending on the currency of the bid submitted.]

| Staff category | Estimated billable man-hours | Estimated no. of man-hours of fieldwork at NBM | Rate per man-hour (fee, EUR) | Total amount of cost (fee, EUR) |
|--|------------------------------|--|------------------------------|---------------------------------|
| Main Project Manager/Key expert no. 1 | 2,406 | NA* | 75 | 180,450 |
| Project Manager (additional for streams) | 5,136 | | 43 | 220,848 |
| Technical Lead/Key expert no. 2 Solution architect | 1,422 | | 85 | 120,870 |
| Work Stream Team Lead /Key expert no. 3 Business analyst | 9,409 | | 53 | 498,677 |
| Business analyst | 11,169 | | 43 | 480,267 |
| Solution architect | 4,786 | | 75 | 358,950 |
| Technical consultant/Key expert no. 7 Technical consultant | 3,539 | | 75 | 265,425 |
| Software developer/Key expert no. 5 Software developer | 5,790 | | 65 | 376,350 |
| Software developer | 11,580 | | 43 | 497,940 |
| Test team leader/ Key expert no. 6 Test team leader | 960 | | 39 | 37,440 |
| Software tester/Test team | 9,620 | | 35 | 336,700 |
| System engineer/Technical consultant | 868 | | 53 | 46,004 |
| Information security officer | 1,180 | | 85 | 100,300 |
| Quality assurance | 582 | | 65 | 37,830 |
| Total | 68,447 | | | 3,558,051 |

Note: 1 man-day = 8 man-hours

* Please note, that Forbis can perform 100% of works via remote access. If requested, work execution directly at NBM location is possible as well, however, due to travel restrictions and ongoing COVID-19 pandemic we cannot provide estimation of exact number of hours.

2. Table: Cost per task

[Cost per task – it includes fees for categories of personnel and tasks from project (project phases as they are described by the tenderer – e.g. Analysis, Design etc.). It should be indicated for each category of staff and main tasks of the project the corresponding fees, respectively the proportion related to fieldwork (NBM headquarters). All amounts will be expressed in EUR / MDL / USD, depending on the currency of the bid submitted.]

| Task | No. of man hours total | No. of man hours of fieldwork total per task | Staff category | | | | | | | | | | | | |
|-------------------|------------------------|--|-----------------------------------|-----------------|-----------------------------|---------------------------|------------------|--------------------|-----------------------------------|-----------|-----|-----------|-----|------|----|
| | | | Main Project Manager (key exp. 1) | Project Manager | Technical Lead (key exp. 2) | WS Team Lead (key exp. 3) | Business analyst | Solution Architect | Technical consultant (key exp. 7) | man hours | EUR | man hours | EUR | | |
| Business Analysis | 9,017 | ** | 400 | 875 | 43 | 400 | 85 | 2448 | 53 | 3060 | 43 | 786 | 75 | 656 | 75 |
| Design | 8997 | | 400 | 875 | 43 | 400 | 85 | 1530 | 53 | 1530 | 43 | 2624 | 75 | 1049 | 75 |
| Build | 17,986 | | 680 | 1530 | 43 | 360 | 85 | 1070 | 53 | 1070 | 43 | 918 | 75 | 459 | 75 |
| Testing | 24,930 | | 600 | 1200 | 43 | 0 | 85 | 2525 | 53 | 2525 | 43 | 360 | 75 | 1080 | 75 |
| Documentation | 2,186 | | 0 | 0 | 43 | 0 | 85 | 0 | 53 | 1836 | 43 | 0 | 75 | 0 | 75 |
| Go-Live | 5,331 | | 326 | 656 | 43 | 262 | 85 | 1836 | 53 | 1148 | 43 | 98 | 75 | 295 | 75 |
| Total | 68,447 | | 2406 | 5136 | 122 | 9409 | 1169 | 4786 | 5339 | | | | | | |

Table continue

| Task | Staff category | | | | | | | | | | Total amount (fees, EUR) | | | |
|-------------------|-------------------------------------|--------------------|-----------------------------|---------------------------|-----------------|-------------------------------------|-------------------------------|-----------|-----|-----------|--------------------------|-----|----|-----------|
| | Software developer/key expert no. 5 | Software developer | Test Team Lead (key exp. 6) | Software tester/Test team | System engineer | The person responsible for security | The person responsible for QA | man hours | EUR | man hours | | EUR | | |
| Business Analysis | 0 | 65 | 0 | 43 | 39 | 0 | 35 | 130 | 53 | 175 | 85 | 87 | 65 | 498,519 |
| Design | 0 | 65 | 0 | 43 | 39 | 0 | 35 | 130 | 53 | 437 | 85 | 22 | 65 | 569,445 |
| Build | 3826 | 65 | 7652 | 43 | 39 | 0 | 35 | 230 | 53 | 153 | 85 | 38 | 65 | 958,776 |
| Testing | 1800 | 65 | 3600 | 43 | 960 | 39 | 9620 | 180 | 53 | 240 | 85 | 240 | 65 | 1,138,480 |
| Documentation | 0 | 65 | 0 | 43 | 39 | 0 | 35 | 0 | 53 | 175 | 85 | 175 | 65 | 105,198 |

| | | | | | | | | | | | | | | | |
|--------------|-------------|--------------|-------------|------------|-------------|------------|------------------|----|-----|----|---|----|----|----|---------|
| Go-Live | 164 | 65 | 328 | 43 | 0 | 39 | 0 | 35 | 198 | 53 | 0 | 85 | 20 | 65 | 287,633 |
| Total | 5790 | 11580 | 9620 | 868 | 1180 | 582 | 3,558,051 | | | | | | | | |

** Please note, that Forbis can perform 100% of works via remote access. If requested, work execution directly at NBM location is possible as well, however, due to travel restrictions and ongoing COVID-19 pandemic we cannot provide estimation of exact number of hours

Signed:  Name: Anton Zujev, Position: Director

Tenderer: Forbis Solutions, Ltd Address: Langdale House, 11 Marshalsea Road, London, SE1 1EN



TOTAL COST OF OWNERSHIP (TCO) (F4.5)

This Form shall be used by the Tenderer to respond to the requirements related to the requirements related to financial proposal as they are described in the specification from tender documents, intended for the description of the components Total cost of ownership (TCO).

The form is structured as follows:

Table 1: TCO summary - [table aggregating cost components, detailed in other tables below this form, including for a period of 5 years after the end of the warranty period (single and recurring costs).]

| No | Name | Period under contract | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | TOTAL (EUR) |
|--------------------|---|-----------------------|---------|---------|---------|---------|---------|------------------|
| 1 | Licenses for the software solution for an Instant payments system (IPS), including one year of standard support from the manufacturer | 2.100.000 | n/a | n/a | n/a | n/a | n/a | 2,100,000 |
| 2 | Standard support from the manufacturer for licenses after warranty period | n/a | 120.000 | 120.000 | 120.000 | 120.000 | 120.000 | 600,000 |
| 3 | Implementation services for IPS | 3.558.000 | n/a | n/a | n/a | n/a | n/a | 3,558,000 |
| 4 | Training services related to IPS | 44.000 | n/a | n/a | n/a | n/a | n/a | 44,000 |
| 5 | Warranty services related to implementation of IPS | 270.000 | n/a | n/a | n/a | n/a | n/a | 270,000 |
| 6 | Man Hours for additional development and change requests during the implementation and warranty period (300 man-hours) | 18.000 | n/a | n/a | n/a | n/a | n/a | 18,000 |
| 7 | Post-warranty services for implementation services of IPS, after one year of standard support | n/a | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | Development services, based on change requests in estimated volume of 100 man / hours after the expiry of the warranty period | n/a | 6.000 | 6.000 | 6.000 | 6.000 | 6.000 | 30,000 |
| TOTAL COSTS | | | | | | | | 6,620,000 |

Table 2: Licenses of the IPS software solution
[All licenses delivered will include in their cost one year of support and maintenance]

| Goods | Q-ty | Period | Price per unit | License price | Support and maintenance | | Discount for licenses | | Discount for support and maintenance | | TOTAL LICENCES (EUR) | TOTAL SUPPORT AND MAINTENANCE (EUR) |
|---|----------|-----------|----------------|---------------|-------------------------|---------|-----------------------|---------|--------------------------------------|--------|----------------------|-------------------------------------|
| | | | | | % | EUR | % | EUR | % | EUR | | |
| 1. Licenses for IPS* | | | | | | | | | | | | |
| Licenses for the production environment | 1 | Unlimited | 2,200,000 | 2,200,000 | | 150,000 | 10 | 220,000 | 2 | 30,000 | 1,980,000 | 120,000 |
| Licenses for the testing environment | Included | | | | | | | | | | | |
| Licenses for the back-up environment | Included | | | | | | | | | | | |
| TOTAL | | | | 2,200,000 | | 150,000 | | 220,000 | | 30,000 | 1,980,000 | 120,000 |

Table 3: Implementation services and warranty services (for 12 months)

| | Type of service | % in total services | Cost, EUR/MDL/USD |
|---|-----------------|---------------------|-------------------|
| I. Implementation services | | 91,47% | 3,558,000 |
| Business Analysis | | | 498,519 |
| Design | | | 569,445 |
| Build | | | 958,776 |
| Testing | | | 1,138,480 |
| Documentation | | | 105,198 |
| Go-Live | | | 287,633 |
| II. Training services related to IPS | | 1,13% | 44,000 |
| III. Warranty services (12 months) | | | |
| Warranty services (maintenance and support) | | 6,94% | 270,000 |
| IV. Man hours for additional development and change requests during implementation and | | | |

| | | |
|-----------------|--------------|------------------|
| warranty period | | |
| 300 man hours | 0,46% | 18,000 |
| | Total | 3,890,000 |

Table 4: Requirements towards infrastructural specifications
[Infrastructure specifications will be indicated for each lot separately.]

a. Server configuration in accordance with proposed architecture

| Component | Recommended | Recommended quantity |
|---|--|---|
| Name of required component | The recommended model for component, features recommended | The recommended quantity for the component (pcs.) |
| Name of required component | The recommended model for component, features recommended | The recommended quantity for the component (pcs.) |
| IAS Web-Interface for backend Internal users (Oracle FORMS) | For 300 users 1 node MSWindows Server Intel Xeon 2.5 GHz 4 core, RAM 64 GB, HDD 100 GB | Min 2 nodes (Main / reserve) |
| Oracle DB Core backend (ORACLE) | For 1800 users Oracle unbreakable Linux 7.1 32 core Intel Xeon v3 last 256 -500 GB RAM 1 TB disk storage for 1 st year with first load. Next year- 0.5 TB Disk storage -HP 3Par 3000-4000 iops every day approximatly 10 000-15 000 iops end of month | 1 node / 1 standby |
| FRS Forbis Remote Services; external JVM /additional Web Services | Oracle unbreakable Linux 7.1 1 node 8 vCore Intel Xeon v3 (> 2 GHZ), 16 GB RAM; 100 GB HDD | Min 2 nodes (Main / reserve) |
| Participation console WEBAPI FRONTEND (can be same host with WAF) | Oracle unbreakable Linux 7.1 1 node 8 vCore Intel Xeon v3 (> 2 GHZ), 16 GB RAM 100 GB HDD | Min 2 nodes (Main / reserve) |

| | | |
|---|---|------------------------------|
| Participation console WEBAPI BACKEND | Oracle unbreakable Linux 7.1 1 node 8 vCore Intel Xeon v3 (> 2 GHZ), 16 GB RAM 100 GB HDD | Min 2 nodes (Main / reserve) |
| Reports server Jasper reports | Oracle unbreakable Linux 7.1 1 node 8 vCore Intel Xeon v3 (> 2 GHZ), 16 GB RAM 100 GB HDD | Min 2 nodes (Main / reserve) |
| FCG Internal Enterprise Service Bus LAN | Oracle unbreakable Linux 7.1 1 node Intel Xeon 12 vCore V3 (> 2 GHZ), 24GB RAM HDD 500GB | Min 2 nodes (Main / reserve) |
| FCG External Enterprise Service Bus DMZ | Oracle unbreakable Linux 7.1 1 node Intel Xeon 12 vCore V3 (> 2 GHZ), 24GB RAM HDD 500GB | Min 2 nodes (Main / reserve) |
| WAF Web Application Firewall / Reverse Proxy ((can be same host with FRONTEND)) | Oracle unbreakable Linux 7.1 1 node 4 vCore Core (> 2 GHZ), 12 GB RAM 50 GB HDD | Min 2 nodes (Main / reserve) |
| ELK Monitoring Log mining, monitoring | Oracle unbreakable Linux 7.1 1 node 4 vCore Core (> 2 GHZ), 12 GB RAM 500 GB HDD | Min 2 nodes (Main / reserve) |
| Unplanned services reserve | Oracle unbreakable Linux 7.1 1 node ; Intel Xeon 12 vCore V3 (> 2 GHZ), 24GB RAM; HDD 500GB | Min 2 nodes (Main / reserve) |
| HSM Hardware Security Module | Utlimaco CryptoServer Se12 PCIe CP5 or other models with higher performance capabilities | Min 2 nodes (Main / reserve) |

b. Specifications of licenses needed for the database management system and estimated costs

| Product Name | Licensing model (per user, processor etc.) | No of recommended licenses | Estimated costs, (EUR)* |
|----------------------------------|--|----------------------------|-------------------------|
| Production environment | | | |
| (Licenses for database) | | | |
| Oracle EE | CPU | 2 | 100.625 |
| Oracle Partitioning | CPU | 2 | 24.363 |
| Oracle ASO | CPU | 2 | 31.776 |
| (Licenses for Oracle Forms) | CPU | 2 | 48.724 |
| (Licenses for operation systems) | | | |
| MSWindows | Essential | 2 | 820 |
| Test environment | | | |
| (Licenses for database) | | | |
| Oracle EE | NUP | 25 | 25.162 |
| Oracle Partitioning | NUP | 25 | 6.100 |
| Oracle ASO | NUP | 25 | 6.930 |
| (Licenses for Oracle Forms) | | | |
| (Licenses for operation systems) | | | |
| MSWindows | NUP | 399*10 | 4.868 |
| Back-up environment | | | |
| (Licenses for database) | | | |
| Oracle EE | Essential | 1 | 412 |
| Oracle Partitioning | | | |
| Oracle ASO | CPU | 2 | 100.625 |
| (Licenses for Oracle Forms) | CPU | 2 | 24.363 |
| (Licenses for operation systems) | CPU | 2 | 31.776 |
| (Licenses for operation systems) | | | |
| MSWindows | CPU | 2 | 48.724 |
| (Licenses for operation systems) | | | |
| MSWindows | Essential | 2 | 820 |

*Please note that specified prices are according to publicly available price lists. Forbis Oracle partner and has right to distribute Oracle licenses and support with discount, if needed.

Table 5: Cost estimation regarding the licenses for the gateway solution (solutions, implemented on the side of IPS participants, that keep the account balances of end users and can authorize, on behalf of the participant, the debit/credit of end users accounts)

| Business Area | Estimated additional costs to the solution | Estimated costs for the implementation services | Estimated additional costs for the support and | Other costs if applicable (to be explained) | TOTAL (EUR) |
|---------------|--|---|--|---|-------------|
| | | | | | |

| | license | | NA | license | NA | maintenance | NA | | |
|--|---------|--------|----|---------|----|-------------|----|-------|---|
| Gateway solution, implemented on the side of IPS participants. Option 1. Only HSM | NA | | | | | | | | |
| Gateway solution, implemented on the side of IPS participants. Option 2. HSM with Forbis provided adapter | | 8.000 | | | | | | 1.760 | Cost for the purchase of specified HSM. The participant himself is responsible for the implementation of HSM and integration solution |
| Gateway solution, implemented on the side of IPS participants. Option 3. HSM with Forbis provided adapter and Forbis Participant's Connection Gate | | | | | | | | | Cost for the purchase of specified HSM. The participant himself is responsible for the integration solution |
| TOTAL | | 35.000 | | 12.000 | | | | 7.700 | Cost for the purchase of specified HSM. |
| | | | | | | | | | 54.700 |
| | | | | | | | | | 68.460 |

Note: The information on licensing costs for the gateway solution is for information purposes only and is not taken into account in the financial evaluation.

Signed:  Name: Anton Zujev Position: Director

Tenderer: **Forbis Solutions, Ltd** Address: Langdale House, 11 Marshalsea Road, London, SE1 1EN

