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1. BACKGROUND INFORMATION

1.1. Partner country

Republic of Bulgaria

1.2. Contracting authority

Student Media World Association, Bulgaria

1.3. Country background

Student Media World Association is Bulgarian non-governmental organization founded in the city of Blagoevgrad. The mission of the Association is to promote modern and sustainable values and practices for development through the cohesion of society and the environment, research and addressing environmental challenges.

Since 2015, the organization has been working on several environmental problems. Part of the Association's activities include developing strategies and programs in areas such as waste management, sustainable local economic development, environmental protection, ecological development and geoecology, biodiversity, water management, health, education, culture, technology, development of tourism, youth, etc. It develops training platforms to educate and promote the a.m. goals. The association focuses its activities on study of legal, technical, economic, financial, customs and environmental issues in order to ensure the local communities well-being.

Student Media World Association maintains effective contacts and cooperation with state institutions and focuses its efforts on attraction of investments for projects development. The academic members of SMWA focus their research efforts on public administration and tax law. They are active in the field of basic and application-oriented research. Current reports and publications produced within the SMWA deal increasingly with issues connected to European research. Members also work as consultants for the state, municipalities and public authorities on a variety of topics including law, finance, human resources, organization and business.

1.4. Current situation in the sector

As a result of human activity, climate change and natural processes, the habitats all over the Balkans are gradually changing, endangering the ecosystem balance in the long run - the natural forests are retreating, giving way to low-stem vegetation which suffocates young plantation. The resulting contamination and flooding are a threat for the entire ecosystem changing the characteristics of the biosphere. Immediate action is required to clean the habitats of harmful vegetation and waste, and restrain visitors from interventions.

The implementation of the project shall contribute for the improvement of the wellbeing for the local communities on the both sides of the border, as well as for the promotion of the principles of sustainable development using training seminars, courses and round tables to discuss ecological, social and economic challenges our modern society is facing, as well as the exchange of experience between the experts of the partners.

1.5. Related programmes and other donor activities

The project contributes to a number of EU and other strategies and policy documents, as follows:

- The Europe 2020;
- The European Strategy for the Danube Region – Pillar “B”, PA5 “To manage environmental risks” and PA6: “To preserve biodiversity, landscapes and the quality of air and soils”;
- EU Country Strategy Paper (2014-2020) for Republic of Serbia
- Disaster Risk Reduction Strategy of Bulgaria: Priority IV, main activity 1 “Effective management of the natural resources and development of social-economical practices”;
- National Program for Environmental Protection and Forestry Development Strategy for Serbia,
- Regional Development Strategy 2014-2020 for Kyustendil Region: Priority V. “Protection of the environment. Environmentally sound management of natural resources;
- The European strategy for smart, inclusive and sustainable growth “Europe 2020” in the Serbian – Bulgarian cross – border region following the relevant national strategic documents.
- Project also supports the implementation of a number of strategic documents in the cross border region, like EU Cohesion Policy 2014 -2020.
- EU Strategy for the Danube Region.

2. OBJECTIVE, PURPOSE & EXPECTED RESULTS

2.1. Overall objective

The overall objective of the project of which this contract will be a part is as follows:

This activity is designed to provide the tools for educating the public on matters concerning the preservation and protection of natural heritage and biodiversity. An educational trilingual (Eng, Bg and Se) CB platform will provide information on biodiversity and-nature preservation and responsible waste management. Its functional, intuitive and contemporary design will ensure attracting the younger generation which is the key for triggering a behavioural change in society.

2.2. Purpose

The purpose of this contract is as follows:

The contractor shall provide the Contracting authority with the necessary expertise for the design and development of the educational platform – both as a technical documentation, overall design to ensure the finished product is as intuitive and informative as possible, as well as the software application is user-friendly and allows seamless integration of materials, courses and assignments from other sources.

2.3. Results to be achieved by the contractor

- Results for Lot 1- The contractor shall develop a design of a learning platform which aims to provide information on the cross-border area ecosystems, nature conservation and responsible waste management, and technical specifications for assigning the construction of the cited platform:
- An external consultancy will be contracted to develop the design of the educational platform in accordance with the educational methods proposed by assignor. On this basis the technical specifications for developing the software application will be elaborated.

- ✓ General description of the DBMS model - tables and relations between them, as well as data types in the tables. Technical requirements to DBMS (minimum number of simultaneous connections to the base, backup requirements, license requirements, hardware provision requirements);
 - ✓ General Block-scheme of the program code which will constitute the server platform, work environment requirements (depending on the preferred technology), additional software requirements, if necessary (e.g., web servers, interpreters, specific libraries), technical requirements for hardware provision, specific licensing requirements. Security requirements (certificates, cryptographic controls, etc.). Scheme for connection to the СУБД (protocols and access channels);
 - ✓ General Block-scheme of the program code which will constitute the user-side part. Browser requirements (if the platform is fully web-based), additional software requirements (applets, ActivX apps, etc., if any), specific licensing requirements (if any). Security requirements (cryptographic controls and data exchange protocols between the client and the server). List of controls that are to be implemented at the user level and platform administrator in terms of data input;
 - ✓ Requirements for the technical documentation of the platform (content of the manuals for users and administrators);
 - ✓ Requirements for the aesthetic layout of the user and administrator interface, including sample screens (mock up screens) of the main predicted functionalities. Layouts of the main components of the user and administrator interface;
 - ✓ Description of the minimum content specification - expected data volume and data type (video if any and text).
- Results for Lot 2 – The contractor shall develop, test and transmit to the Contracting Authority a functional learning platform according to the technical specifications, developed under the implementation of Lot 1, that include minimum the following functionality:
 - General features:
 - Collaborative tools and activities - Work and learn in group activities and competitions.
 - All-in-one calendar - Keeping track of scores and events.
 - Administrative features:
 - Secure authentication.
 - File management - Drag and drop files from cloud storage services or other.
 - Multilingual capability - Allow users to view course content and learn in different languages.
 - Course creation and easy backup - Add courses, backup and restore large courses with ease.
 - Manage user roles and permissions - Address security concerns by defining roles to specify and manage user access.
 - Course Development and Management Features:
 - Direct learning paths - Design and manage courses to meet various requirements. Classes should be instructor-led , self-paced, blended or entirely online.
 - Encourage collaboration - Built-in collaborative publishing features foster engagement and encourage content-driven collaboration.

- Embed external resources - Functionality allowing teach materials and assignments from other sites to be included.
- Marking workflow - Assign different markers to assignments, manage grade moderation and control when marks are released to individual learners.
- Outcomes and overview - Outcomes and overviews of the answers.
- Option for security and privacy - Teach, share and test in a private space only the user and/or its class can access.

3. ASSUMPTIONS & RISKS

3.1. Assumptions underlying the project

The implementation of the current contract will support the Contracting Authority in the process of implementation of the project “Embrace Nature”, financed under INTERREG-IPA CBC Bulgaria-Serbia Programme, and will assure compliance with the EU regulations. The following assumptions can be made in order to reduce the risks related to delay or non-realization of the activities, subject to this Terms of Reference:

- Clear understanding of the contract purpose and tasks on behalf of the Contractor;
- Full cooperation between the Contracting Authority and the Contractor in view to fulfil the tasks on time, with high quality and within the budget limitation;
- Timely reimbursement of funds under the INTERREG - IPA CBC Bulgaria - Serbia Programme.

3.2. Risks

Potential risks to the successful implementation of the contract include:

- Lack of communication and logistical coordination between the Contractor and the Contracting Authority. In order to avoid this risk, the Contractor should show initiative and maintain continuous contact with the relevant representatives of the Contracting Authority;
- Insufficient quality of the services provided by the Contractor experts. In order to avoid this risk, the Contractor should use the most reliable and experienced staff/service providers on its disposal.

4. SCOPE OF THE WORK

4.1. General

4.1.1. Description of the assignment

The current contract will support the Contracting Authority in the process of implementation of the project “Embrace Nature”, financed under INTERREG-IPA CBC Bulgaria-Serbia Programme, providing high quality professional service in the development of the educational platform, key to the sustainable results of the project implementation.

4.1.2. Geographical area to be covered

The cross-border region, covered by CBC Bulgaria- Serbia program, specifically the areas of Bobov Dol, Bulgaria and Nis, Serbia.

4.1.3. Target groups

- School students

4.2. Specific work

Lot 1:

- Task 1 – Design of the educational platform in accordance with the educational methods, proposed by the contracting authority;
- Task 2 – Elaboration of the technical requirements for developing the software application, observing the minimal requirements, stated in art.2.2.

Lot 2:

- Task 1 – Review of the ToR for the service
- Task 2 – Development of web and mobile versions of the platform according to the ToR
- Task 3 – Implementation of the software application to include testing and debugging.

4.3. Project management

4.3.1. Responsible body

The member of the team of the Contracting authority, responsible for the overall management and coordination of the project shall be Ms Simeona Nonkova.

4.3.2. Management structure

The Contracting Authority is responsible to launch the service tender procedure, sign the service contract, accept the work of the Contractor, authorize payments to the Contractor and handle the financial management and control during project implementation.

The day-to-day operational work on implementation of the contract will be also performed by experts in the team of the Contracting Authority, in particular the project management team:

- Ms Simeona Nonkova

4.3.3. Facilities to be provided by the contracting authority and/or other parties

The Contracting authority shall provide the Contractor with additional information, if necessary, for the contract implementation and shall ensure the necessary coordination with the relevant project stakeholders, where applicable.

5. LOGISTICS AND TIMING

5.1. Location

The work place of the contractor is not related to the cross-border area. Due to the COVID-19 situation, a remote work from home solution is preferred.

5.2. Start date & period of implementation of tasks

The intended start date is September 2021.

The expected implementation period for Lot 1 is no more than 50 working days from receiving an assignment letter from the Contracting Authority.

The expected implementation period for Lot 2 is no more than 100 working days from receiving an assignment letter from the Contracting Authority. The start of the implementation of the activities for Lot 2 shall depend on the implementation schedule, developed during the implementation of the tasks under Lot 1.

Should the implementation of the tasks for the two lots be awarded to different contractors, the Contracting Authority shall notify the Lot 2 awardee for the schedule, negotiated with the contractor, implementing Lot 1 in order to provide an indicative timeframe for the expected start of the implementation of the activities

6. REQUIREMENTS

6.1. Staff

Note that civil servants and other staff of the public administration of the partner country, or of international/regional organisations based in the country, shall only be approved to work as experts if well justified. The justification should be submitted with the tender and shall include information on the added value the expert will bring as well as proof that the expert is seconded or on personal leave.

6.1.1. Key experts

Key experts are not required.

6.1.2. Other experts, support staff & backstopping

CVs for experts other than the key experts should not be submitted in the tender but the tenderer will have to demonstrate in their offer that they have access to experts with the required profiles. The contractor shall select and hire other experts as required according to the needs. The selection procedures used by the contractor to select these other experts shall be transparent, and shall be based on pre-defined criteria, including professional qualifications, language skills and work experience.

The costs for backstopping and support staff, as needed, are considered to be included in the tenderer's financial offer.

Lot 1:

➤ Expert 1: Data base developer

General requirements:

Minimum Bachelor's degree (Master's is preferred) in higher education in the field of "Natural Sciences, Mathematics and Informatics" or in the field of "Technical Sciences" according to the classifier of the areas of higher education and the professional fields adopted by Decree № 125 of 2002 or equivalent degree obtained abroad in equivalent fields as the mentioned above.

Specific experience

At least 2 years' experience or at least in 2 activities experience in the field of development, configuration, administration or designing of data bases.

➤ **Expert 2: Back end (server-side) developer**

General requirements:

Minimum Bachelor's degree (Master's is preferred) in higher education in the field of "Natural Sciences, Mathematics and Informatics" or in the field of "Technical Sciences" according to the classifier of the areas of higher education and the professional fields adopted by Decree № 125 of 2002 or equivalent degree obtained abroad in equivalent fields as the mentioned above.

Specific experience

At least 2 years' experience or at least in 2 activities in the field of development of server-based applications.

➤ **Expert 3: Front-end designer**

General requirements:

Minimum Bachelor's degree (Master's is preferred) in higher education in the field of "Natural Sciences, Mathematics and Informatics" or in the field of "Technical Sciences" according to the classifier of the areas of higher education and the professional fields adopted by Decree № 125 of 2002 or equivalent degree obtained abroad in equivalent fields as the mentioned above.

Specific experience

At least 2 years' experience or at least in 2 activities in the field of graphical user interface.

➤ **Expert 4: Expert "Ecology"**

General requirements:

Minimum Bachelor's degree in higher education in the field of "Natural Sciences, Mathematics and Informatics", "Technical sciences" or in the field of "Agro science and veterinary medicine" according to the classifier of the areas of higher education and the professional fields adopted by Decree №: 125 of 2002 or equivalent degree obtained abroad in equivalent fields as the mentioned above. At least 1 year professional experience.

Specific experience

At least 2 years' practical experience in the field of ecology/ waste management.

Lot 2:

➤ **Expert 1: Data base developer**

General requirements:

Minimum Bachelor's degree (Master's is preferred) in higher education in the field of "Natural Sciences, Mathematics and Informatics" or in the field of "Technical Sciences" according to the classifier of the areas of higher education and the professional fields adopted by Decree № 125 of 2002 or equivalent degree obtained abroad in equivalent fields as the mentioned above.

Specific experience

At least 2 years ' experience or at least in 2 activities in the field of development, configuration, administration or designing of data bases.

➤ **Expert 2: Back end (server-side) developer**

General requirements:

Minimum Bachelor's degree (Master's is preferred) in higher education in the field of "Natural Sciences, Mathematics and Informatics" or in the field of "Technical Sciences" according to the classifier of the areas of higher education and the professional fields adopted by Decree № 125 of

Specific experience

At least 2 years' experience or at least in 2 activities in the field of development of server-based applications.

➤ **Expert 3: Front-end developer**

General requirements:

Minimum Bachelor's degree (Master's is preferred) in higher education in the field of "Natural Sciences, Mathematics and Informatics", "Social, economic and legal sciences" or in the field of "Technical Sciences" according to the classifier of the areas of higher education and the professional fields adopted by Decree № 125 of 2002 or equivalent degree obtained abroad in equivalent fields as the mentioned above.

Specific experience

At least 2 years' experience or at least in 2 activities in the field of development of client applications, including web-based front-end.

The costs for backstopping and support staff, as needed, are considered to be included in the tenderer's financial offer.

6.2. Office accommodation

Office accommodation for each expert working on the contract is to be provided by the contractor.

6.3. Facilities to be provided by the contractor

The contractor shall ensure that experts are adequately supported and equipped. In particular, it must ensure that there is sufficient administrative, secretarial and interpreting provision to enable experts to concentrate on their primary responsibilities. It must also transfer funds as necessary to support their work under the contract and to ensure that its employees are paid regularly and in a timely fashion.

6.4. Equipment

No equipment is to be purchased on behalf of the contracting authority / partner country as part of this service contract or transferred to the contracting authority / partner country at the end of this contract. Any equipment related to this contract which is to be acquired by the partner country must be purchased by means of a separate supply tender procedure.

The contracting authority shall provide the hosting for the platform.

7. REPORTS

7.1. Reporting requirements

The contractor will submit the following reports in English in one original:

Final report in free format. This report shall be submitted no later than 20 (twenty) business days after the implementation of all tasks under the current Contract. It should provide conclusions of the implementation of all requested services. The final report must be provided along with the corresponding invoice.

7.2. Submission and approval of reports

The report referred to above must be submitted to the project manager identified in the contract. The project manager is responsible for approving the reports.

8. MONITORING AND EVALUATION

8.1. Definition of indicators

The qualitative indicator of the successful implementation of the contract is “Services provided in timely, quality and quantity manner as required in these Terms of Reference”.

The following quantitative results are to be achieved:

- A description/ design of the platform,
- Technical specifications which will be the basis for developing the software application for the platform.
- An educational platform – operational, installed on hardware of the Assignor, and tested by the Assignor,
- A document with the description of the platform modules,
- A document with the Description of the software (supported operational systems, browsers, additional program applications – web servers, interpreters, etc.) and hardware requirements,
- User and administrator manual for platform operations.

8.2. Special requirements

In case of deterioration of the situation with the Coronavirus, the contract will be performed in accordance with Art. 38 Force majeure of the General conditions of the contract (Annex I).