



USAID Business Enabling Project in Serbia JOB DESCRIPTION AND STATEMENT OF WORK

Position: IT Specialist

Employer: Cardno Emerging Markets USA Ltd., Washington DC, Belgrade Representative Office

Location: Serbia, Belgrade

Background to SOW

Program Budgeting Implementation

With USAID BEP's significant assistance, program budgeting (PB) was implemented by all budget beneficiaries starting from the 2015 GoS budget, as required under the Budget System Law. This budgeting approach presents government finances in a way that enables better measurement of the benefits and costs of how funds are used.

USAID BEP has supported the Budget Department (BD) of Ministry of Finance (MoF) in developing PB framework and Methodological guidelines, piloting the new PB model with twelve budget beneficiaries in the 2014 budget, and its utilization by all budget beneficiaries in the 2015 and 2016 budgets.

Furthermore, in 2016 USAID BEP Project helped Ministry of Finance to develop new information system to support budget preparation process. With the implementation of the new Budgeting Information System (BIS) Ministry of Finance automated entire annual process of budget preparation, including the preparation and adoption of priority areas of financing; collection of proposals of financial plans; preparation and adoption of annual budgets with the projections for the upcoming two-year period; and preparation of supplementary budgets.

As USAID holds intellectual property rights on the all elements of the IT system developed in the scope of this project and is entitled to transfer it to any party at its sole discretion. USAID intends to share the source code developed under the USAID BEP project with other USAID Missions whose counterparts have similar needs. In order to do so, the USAID BEP intends to engage a consultant to clean the database (which is part of developed information system) of any information entered in 2017 budget cycle by Serbian Ministry of Finance and budget beneficiaries as well as from any user data or information. In addition, the Ministry of Finance of Serbia will verify that all sensitive data has been cleaned form the system..

Objectives and Tasks

The central objective and accompanying tasks of this STTA is to:

- 1) Clean the source code and system database from any information entered in 2017 budget cycle by Serbian Ministry of Finance and budget beneficiaries as well as from any user data or information.

The Ministry of Finance of Serbia will verify that all sensitive data has been cleaned form the system.

USAID BEP intends to engage a Consultant with significant background and practical experience in the fields of IT, software development and IT security in accomplishing the above mentioned tasks. The Consultant will plan and implement the work schedule in accordance with USAID BEP in order to examine the source code and conduct necessary steps. The Consultant will need to get fully acquainted with the recently developed Budgeting Information System (BIS) and the system source code. This

implies thorough analysis of the Budgeting Information System Operation Report (a document that provides high level of details of the implemented functionalities), the system source code and any other document or consultation that the consultant might require in order to perform this task.

BIS system architecture

Platform and technologies

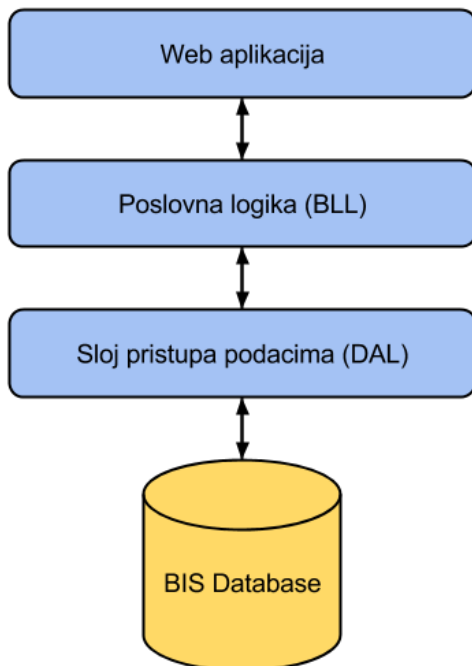
Budgeting Information System has been developed using Microsoft platform with the usage of following implementing technologies

- .NET Framework 4.5
- ASP.NET MVC
- Internet Information Services (IIS) 7.5 or newer
- Windows Server 2008 or newer
- SQL Server 2008 R2 or newer
- SQL Server Reporting Services (SSRS) 2008 or newer

Logical BIS architecture

The system is based on enterprise architecture, with a three-layer logical design, with the presentation tier, business logic tier and data storage tier architecture

Below is the structure of the tier levels:





Presentation tier

Presentation tier is a WEB application developed as a .NET MVC Web application, utilizing WebAPI, CSS3, jQuery, Bootstrap and other javascript libraries and AJAX technologies, to ensure the most efficient and user friendly environment and system performance.

The above mentioned jQuery and other javascript libraries, together with AJAX technologies ensure transparent client validation. Using these technologies BIS system enables data validation of all entering data.

Business Logic Tier

Business logic tier is implemented as a set of WebAPI services enabling all necessary business logic in terms of functionalities. All communication with the business logic tier is a two way communication. All requests coming from the web application are being processed with the specific WebAPI service from the business logic tier.

Data Storage Tier Architecture

The data layer contains all necessary components to access data stored in a centralized warehouse - BIS database. To ensure the best performance and reliability of this layer database, access is enabled via Entity Framework objects or classical SQL (such as stored procedures and functions).

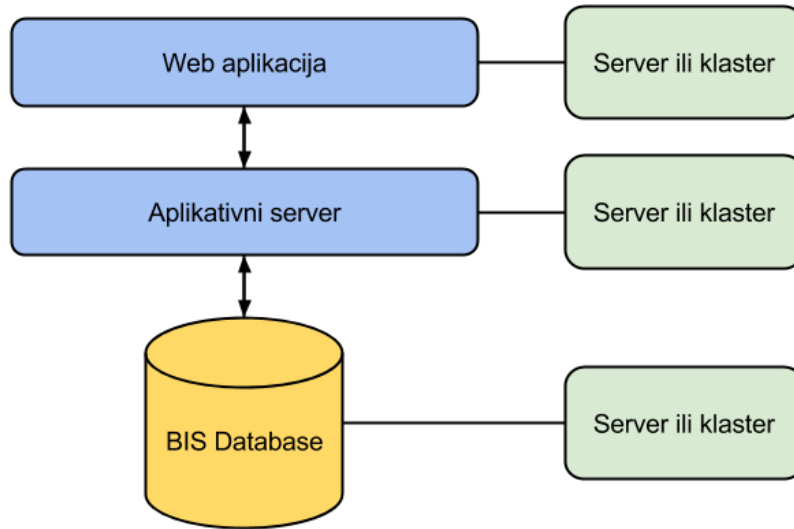
BIS database is a MS SQL server based database. It contains all data, tables, stored procedures and other necessary facilities and services.

BIS database is centralized data warehouse for their storage and processing. This ensures that users transparently work with a single database in online mode, regardless of where they access the system.

Physical organization and infrastructure of the BIS system

BIS system is designed as a three-tier system enabling scalability, and the possibility to utilize the existing infrastructure the best way possible.

Below is a structure of the system architecture in a three-tier configuration:



- Web application level with the web application accessible to clients using standard web browsers;
- Application level, contains all business logic (BLL) and data storage (DAL) levels;
- BIS database presents MS SQL server.

Level of effort

Maximum number of days under this SoW cannot exceed ten (10) days.

Period of Performance

Period of performance of this SoW is 20.02 to 20.03.

Deliverables

- 1) Version of the source code with database cleaned from any information entered by Serbian Ministry of Finance in 2017 budget cycle and budget beneficiaries as well as from any user data or information.
- 2) Final STTA report on the work performed and results achieved with the explanation what has been cleaned from the source code. This document should be prepared in English.

To Apply

USAID BEP intends to engage a Consultant with significant background and practical experience in the fields of IT, software development and IT security to perform all of the above mentioned tasks.

1. Requirements for eligible candidates:

- a) Relevant educational background and minimum 5 years of experience in similar assignments;
- b) Proven experience in in the fields of IT, software development and IT security;
- c) Expertise in program and performance budgeting, and proven understanding of budgeting processes and procedures in Serbia will be considered an advantage;



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d) Excellent English writing skills.

2. Applications including CV clearly showing adequate technical background and relevant work experience should be sent by e-mail to: info@bep.rs, by 15.02. Only shortlisted candidates will be contacted.