

**Prozorro Project Implementation Support – Development of Multi-Criteria Auction**

Deliverable 3:

1. Final report on completion of testing of the Open Source Open Data OCDS prototype/ Minimum Viable Product of architecture for testing, in integrated infrastructure, various multi-criteria electronic auctions for ProZorro Project.

2. Final report on development of the Open Source Open Data OCDS prototype/ Minimum Viable Product of architecture for testing, in an integrated environment, various multi-criteria electronic auctions for ProZorro Project.

February 2020

**Approval page**

Kyiv and London, February 2020

This “Completion report” has been examined by the EBRD and is hereby recommended for approval and acceptance.

**Completion report**

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| --- | --- |
| **Client Name** | EBRD |
| **Project** | Prozorro Project Implementation Support – Development of Multi-Criteria Auction, C39804 |

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| **The output is specified in the table below and includes a list of delivered deliverables.**  **The output is in accordance with approved specifications and complies with all conditions defined in the Contract, as per the Terms of Reference.** | | |
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# Introduction

This report covers the Deliverable 3 under the EBRD project “Ukraine: Prozorro Project Implementation Support – Development of Multi-Criteria Auction” that is implemented by Transparency International Ukraine under the Contribution Agreement C39804.

This completion report contains:

* + Final report on completion of testing of the Open Source Open Data Open Contracting Data Standard (OCDS) prototype/Minimum Viable product (MPV) of architecture for testing, in integrated infrastructure, various multi-criteria electronic auctions for the ProZorro Project;
  + Final report on development of the Open Source Open Data OCDS prototype/MPV of architecture for testing, in integrated environment, various multi-criteria electronic auctions for the ProZorro Project.

The objective of this document is to present the main results of the EBRD project “Prozorro: Implementation Support – Development of Multi-Criteria Auction”.

# Project Overview

## Background

The ProZorro Project was initiated in Kiev in May 2014 by a group of anticorruption social activists supported by Transparency International Ukraine (TI Ukraine) interested in developing an electronic procurement platform for all Ukrainian public agencies. Their goal was to provide an accessible electronic procurement solution called ProZorro to be used on a voluntary basis to reduce corruption in the public procurement sector in Ukraine. The ProZorro Project was established on a pro bono basis.

Based on a memorandum of understanding between TI Ukraine and operators of commercial electronic procurement platforms, a small-scale central unit solution was commissioned by TI Ukraine and built on a proof-of-concept basis. Upon completing the development of the central unit, commercial platforms were connected to it to provide end-user interaction via an Application Programming Interface (API), and the ProZorro Project was launched and started piloting electronic bidding in Ukraine in January 2015.

The ProZorro Project was developed in accordance with the latest international standards for data in public procurement, the Open Contracting Data Standard[[1]](#footnote-1), which was developed by the Open Contracting Partnership and the software used by the ProZorro Project is open source.[[2]](#footnote-2)

## 2.2 Project objectives

This project is designed to develop an Open Source Open Data OCDS prototype / MVP of the architecture for testing, in an integrated environment, various multi-criteria electronic auctions for the ProZorro Project and delivering the following results:

1. complete and operational OCDS-design for all prescribed models of multi-criteria electronic auctions;
2. complete and operational OCDS-design for applying evaluation criteria and weightings for multi-criteria electronic auctions;
3. MVP of architecture and operational prototype, ready for testing in an integrated environment.

## Project team

The project was implemented by a dedicated project team, combining legal, business and technology experts shown in Table 1.

Table 1 - Project team

|  |  |  |  |
| --- | --- | --- | --- |
| **Organization** | **Name** | **Position** | **Location and contacts** |
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## 

## Budget

The project budget is shown in Table 2 and impl*e*mentation of the project was in *accordance* with this budget.

Table 2 - Project budget

|  |  |  |
| --- | --- | --- |
| **Expected outputs** | | **Budget, EUR** |
| **Component 1. Scoring function: definition of the requirements together with conversions for the Procurement Process under Contract Notice** | | 3’500,00 |
|  | OCDS design for the set of criteria and requirements under specific contracting process  OCDS design for the set of groups of weightings related with verifiable criteria |
| **Component 2. Digitized bid: formulation of the offer according to defined scoring function** | | 1’500,00 |
|  | OCDS design of selection and collection of relevant weightings |
| **Component 3. Structured data framework for OCDS-based electronic auctions** | | 5’000,00 |
|  | Business Processes description based on BPMN-diagrams  OCDS framework design for the electronic auction as a part of entire procurement |
| **Component 4. Operational prototype of MVP** | | 42’000,00 |
|  | Design of architecture for eAuction engine  Development of eAuction engine  MVP roll-out in the integrated environment  Testing |
| **Total project budget** | | **52’000,00** |

# Deliverables

## Summary of activities performed

This section summarizes the main activities performed in each of the four components of the project, including a description of the project deliverables presented in each of the phases.

### Component 1. Scoring function

The objective of this component was to identify a set of different types of scoring criteria which could be used (as well as the price) for the evaluation of bids in an electronic auction and to design an OCDS-based data scheme (either an OCDS extension or implementation of existing definitions of the standard) for the definition as well as description of the scoring function, including a set of applicable coefficients, available weightings and mathematical formulas.

### Component 2. Digitized bid: formulation of the offer according to defined scoring function

The objective of this component was to design the OCDS-based data scheme (either an OCDS extension or by implementation of existing definitions of the standard) for the collection, storing and publication of set of values for options of the used scoring function, selected by the tenderer.

### Component 3. Structured data framework for OCDS-based electronic auctions

The objective of this component was to develop an extension of OCDS 1.1, which describes an electronic auction as a part of the procurement procedure from the process perspective:

* definition of general framework of the selected model of electronic auction
* definition and values of the modalities for the selected model
* definition of the general design and details of features of the electronic auction: general method, quantity and duration of rounds (if applicable), minimum eligible difference, etc
* description of set of bids of a particular electronic auction together with all non-price values submitted
* description of the history of a particular electronic auction
* description of the results of a particular electronic auction
* Interactive prototype of the multi-attribute reverse auction described above

### Component 4. Operational prototype of MVP

The objective of this component was to develop an OCDS prototype / MVP of the system architecture, and roll-out it out for future testing in an integrated environment.

## List of deliverables

**For the Component 1**

* Implementation of OCDS community extension (‘Requirements’) for the definition of verifiable and/or qualifiable scoring criteria and requirements of the specific auction process:

<https://github.com/uStudioCompany/eOCDS-requirements>

* Specific ‘Conversions’ OCDS extension which describes the definition of a set of available groups of coefficients and scoring weightings:

<https://github.com/uStudioCompany/eOCDS-conversions>

**For the Component 2**

* Implementation of OCDS community extension (‘Requirements’) as a design of selection and collection of relevant weightings of a particular bid (and the tenderer himself) during the submission period of the auction.

<https://github.com/uStudioCompany/eOCDS-requirements#digitized-bid>

**For the Component 3**

* OCDS framework as a design for the electronic auction, based on any required model (including combined) as a part of an entire procurement process:

<https://github.com/uStudioCompany/eOCDS-eAuction>

* Interactive prototype of the multi-attribute reverse auction:

<http://ui.eprocurement.systems>

**For the Component 4**

* Open Source Open Data OCDS prototype / MVP of architecture for testing, in an integrated environment, various multi-criteria electronic auctions for the ProZorro Project;
* Roll-out of the prototype in the integrated environment for future testing with the M-Cloud, MTender Electronic Public Procurement system in the Republic of Moldova;
* Completion of testing of the Open Source Open Data OCDS prototype/MPV architecture for testing, in integrated infrastructure, of various multi-criteria electronic auctions for the ProZorro Project

## Project outputs

As part of the engagement, the project team will implement the development of the Open Source Open Data OCDS prototype / MVP of architecture for testing, in an integrated environment, of various multi-criteria electronic auctions for the ProZorro Project. It is suggested to divide the project into four components, which will enable effective project implementation as follows:

**Component 1. Scoring function: definition of the requirements together with conversions for the Procurement Process under Contract Notice**

* OCDS design for the set of criteria and requirements under specific contracting processes;
* OCDS design for the set of groups of scoring weightings with verifiable related criteria

**Component 2. Digitized bid: formulation of the offer according to a defined scoring function**

* OCDS design of selection and collection of relevant weightings

**Component 3. Structured data framework for OCDS-based electronic auctions**

* Business Processes description based on BPMN-diagrams
* OCDS framework design for the electronic auction as a part of entire procurement process.

**Component 4. Operational prototype of MVP**

* Design of architecture for an eAuction engine
* Development of the MVP of an eAuction engine
* Roll-out of developed MVP in the integrated environment
* Testing

**Deliverable: Completion report**

# Lessons learned

Based on lessons learned from introducing electronic public procurement solutions in the public sector in Ukraine it is suggested that a similar Open Data, Open Source and OCDS approach can be developed for sales of public property and sale of assets of insolvent banks and banks that are being liquidated. In the case of Ukraine, sales of assets of insolvent banks that are under the procedure of temporary administration or liquidation were initially carried out by a number of entities who did not possess the necessary qualifications and professional qualities to ensure a transparent sales process. There was no equal access to tenders and effective control as regards of the awarding of contracts. In addition, international investors had restricted access to locally organized auctions selling assets of insolvent banks and as a result some assets were not disposed of.

In an effort to address these challenges in June 2016, the Ministry of Economic Development and Trade of Ukraine (the “Ministry”), Transparency International Ukraine, the Deposit Guarantee Fund (the “DGF”) and National Bank of Ukraine (the “NBU”) signed a Memorandum of Understanding (the “MoU”) to develop a transparent, fast and effective electronic auction system (the “EAS”) for sale of assets (property) of insolvent banks that underwent the procedure of temporary administration or liquidation. The aim was to fight corruption, ensure equal access to sales data, improve public oversight and increase the number of potential buyers.

The EAS was based on the concept and lessons learned from ProZorro – a successful electronic public procurement solution - implemented in Ukraine inter alia with the EBRD support. The objective was to test the ProZorro business concept for different type of electronic auctions and to develop a basic e-government solution for sale of assets (property).

TI Ukraine, which previously supported the establishment of ProZorro electronic public procurement scheme had taken the responsibility for creating and administering the new e-government solution for selling online different types of state-owned assets. Resulting from it a new EAS solution was developed and named Prozorro.Sales.

The goal of the stakeholders was to ensure a transparent and efficient online sale of different types of state–owned properties and/or assets. For this reason, TI Ukraine in cooperation with the Ministry of Economic Development and Trade of Ukraine requested the EBRD’s assistance with the development of the multi-criteria auction engine and with administering the new e-government solution for selling online different types of state-owned assets until Prozorro.Sales will be transferred to a newly established state-owned entity under the Ministry. These terms of reference set out the objectives of grant financing via a contribution agreement from the EBRD to the TI Ukraine towards development of the multi-criteria auction engine and the conditions which the EBRD proposes to attach to such grant financing.

1. <https://www.open-contracting.org/data-standard/> [↑](#footnote-ref-1)
2. <http://api-docs.openprocurement.org/en/latest/>. [↑](#footnote-ref-2)