**Data analyst for the National Agency on Corruption Prevention**

**Terms of Reference**

1. **Background**

Supporting anti-corruption efforts in Ukraine is a high political priority for the European Union. By combating corruption, the EU contributes to the consolidation of democracy and economic growth of Ukraine, as well as successful approximation of Ukraine with the EU.

Based on the significant results of the joint Danish and EU Anti-Corruption Initiative (EUACI) in Phase I 2017-2020, Denmark and the EU engaged in a second phase of the programme aimed at sustaining existing results and further expanding the support to newly established institutions, support to municipalities, civil society, media and the business sector. EUACI Phase II builds on the Ukrainian anti-corruption reform agenda and is intended for implementation on 24 May 2020 – 8 July 2024.

In October 2019, the Ukrainian Parliament amended the Law on Corruption Prevention to ensure the effectiveness of the corruption prevention institutional mechanism by relaunching the agency. EUACI has been actively supporting the restructuring process of the agency following these legislative amendments. Relaunch of the agency and open and competitive NACP Head selection process re-established the trust among many international actors to re-engage with the agency. NACP is using this opportunity to invigorate the agency by designing and implementing a number of reforms in different areas of the competences of the agency in order to ensure the effectiveness of the corruption prevention institutional mechanism and deliver real and substantial results.

EUACI supports key areas of NACP’s multi-pronged mandate, including strengthening the governance and administrative and institutional capacities to ensure sustainable institutional development of NACP.

For the last year, the NACP is constantly introducing new digital tools to improve its efficiency, namely:

* Register of political parties financial reporting
* Updated Declarations Portal
* Updated Register of corrupt officials
* System for auto-distribution of cases
* Internal project management and internal communication systems: Jira / Slack / Confluence / Service desk.

A number of other IT projects are already in process of development or at the initial stage of preparation:

* New document flow and case management systems
* Portal of Whistleblowers
* Portal of Anti-Corruption Officers

This complex of closely integrated technical solutions aimed at building a coherent system for the prevention of corruption in the NACP. Having such a system, the NACP will be able to:

* significantly enhance efficiency by increasing bandwidth at bottlenecks - in analytical work;
* make evidence-based strategic decisions to prevent corruption, propose amendments to legislation and regulations, prepare guidelines and recommendations for other bodies.
* share best practices of effective digitalization with other bodies both within Ukraine and abroad.

Currently, the NACP needs expert assistance in several projects that significantly influence key statutory activities of the Agency, namely:

* The Case Management System (eCase), which will digitize and speed up all inspection processes, replace old document flow and connect other systems. The system should be launched by October 2021, then the implementation and user adaptation will take place.
* The portal of anti-corruption officers that will be integrated with eCase system, will automate the business processes related to anti-corruption officers’ duties, allow centralized monitoring and analysis of their activities to enhance their efficiency in the future.
* A new high-performance analytical Data Warehouse/Data Mining (DWH/DM) system will become one of the first comprehensive data processing project in Ukraine that will enable NACP to process and analyze a vast amount of accessible data essential for the effective implementation of its activities requiring verification of such data. The DWH/DM solution will have an impact on the efficiency and quality of centralized data processing in line with NACP business processes and to effectively identify corruption cases using patterns or machine learning methods. Capacity development achieved as a result of the implementation of DWH/DM project represents a significant enhancement of NACP’s capacity to deliver on its mandate. As of now the feasibility study is ongoing and the final decision on supply and implementation the system will be taken after its finalisation.
* The NACP IT strategy for 2021-2023 - crucial document guiding the quality and harmonious development of the Agency’s IT infrastructure and inter system integration.

1. **Objective**

The main objective of the technical support to be provided to the NACP within the framework of this engagement is to assist the National Agency in building the comprehensive and innovative IT solutions for corruption prevention through expert assistance in 3 components:

* deep analysis of the NACP data landscape including registries and systems that NACP operates, external registries/sources and open data datasets available to NACP, to propose an approach to effective collection, storage, processing and interoperability of data;
* designing an effective and end-to-end data model of new means of detecting corruption schemes using risk analysis, as well as data model for collecting and processing statistical information on conducted inspections, analysis of potential for integration with databases and data sets;
* provision of consultations on data processing, building data sets and data models for development and launch of the NACP IT solutions (eCase system), upgrading existing solutions (system of Logical and Arithmetical Control), and contributing to the corresponding TOR’s for the system in case of positive decision on supply and implementation analytical platform (DWH/DM system).
1. **Scope of work and expected deliverables**

**Scope of work**

1. Analysis of existing databases and datasets that NACP owns or has access to in terms of the data formats, data quality and interoperability.
2. Designing data models for collecting and processing statistical information on conducted inspections.
3. Designing data model of new means for detecting corruption schemes using risk analysis approach developed by NACP.
4. Assistance in finalization and launch of eCase system, provision of consultations on data migration from the previous system, approaches to organization of data collected within the system, it’s interoperability with existing and planned IT projects of the NACP.
5. Analysis of data-related functionality and participation in the development of technical requirements for the Portal of Anti-Corruption Officers.
6. Provision of technical expertise on data storage structures, data mining, data verification and data cleansing for the NACP IT systems, cooperation with NACP management to define and prioritize data-related needs within preparation of the NACP IT strategy for 2021-2023.
7. In case of positive decision on supply and implementation of DWH/DM analytical platform, contribution to the development of TOR for the system as a data analyst subject matter expert to determine and clarify requirements/scope of work for the project.

Other data-related analysis up to the request of the NACP management.

1. **Expected deliverables:**
2. Data analysis in form of the consolidated report on datasets needed/ processed/ available, the format of the data, accessibility and interoperability for the following projects:
	* e-Case (Case management system)
	* Updated Portal of declarations, including Logical and Arithmetical control module
	* Register of Political Parties Financial Reporting
	* Updated Register of corrupt officials
	* Portal of Anti-Corruption Officers
	* Portal of Whistleblowers.
3. Designed data model for collecting and processing statistical information on conducted inspections.
4. Designed data model of new means for detecting corruption schemes using risk analysis approach.
5. Prepared recommendations on data migration to eCase from the previous system, approaches to organization of data collected within the eCase system, its interoperability with existing and planned IT projects of the NACP.
6. Prepared recommendations on data-related functionality to technical requirements for the Portal of Anti-Corruption Officers.
7. Provided technical expertise on data storage structures, data mining, and data cleansing for the NACP IT systems, conducted interviews with NACP management to define and prioritize data-related needs within preparation of the NACP IT strategy for 2021-2023.
8. Prepared narrative report (5 pages long) with identification of key results and recommendations for further development.

**5.** **Timeline**

The period of implementation of the contract will be 12 months, with the duration of 75 working days. The intended commencement date is the date of signature of the contract with the consultant.

**6.**    **Professional Requirements**

* + Master’s/Bachelor's degree in IT, Mathematics or related field (or equivalent work experience)
	+ At least 5 years in the IT industry
	+ At least 3 years working experience as a Data Analyst, Data Scientist or Business Analyst
	+ Technical expertise regarding data models, database design development, data mining and segmentation techniques
	+ Experience using statistical computer languages (R, Python, SQL, etc.) to manipulate data and draw insights from large data sets
	+ Experience working with and creating DB/DWH/DL architectures, design ETL/ELT will be considered as an advantage.
	+ Knowledge of a variety of machine learning techniques (clustering, decision tree learning, artificial neural networks, etc.) and their real-world advantages/drawbacks
	+ Knowledge of advanced statistical techniques and concepts (regression, properties of distributions, statistical tests and proper usage, etc.) and experience with applications
	+ Open-source projects or work examples available on GitHub for review will be an advantage
	+ Ability to work in a team
	+ Strong analytical skills with the ability to collect, organize, analyze, and disseminate significant amounts of information with attention to detail and accuracy
	+ Effective problem-solving, negotiation, and decision-making skills
	+ Fluency in written and oral Ukrainian and English

**7. Monitoring and evaluation**

Definition of indicators

The performance of the contractor will be judged upon reaching the purpose of this contract as well as obtaining its results, as indicated in the sections "Objective" and "Expected Deliverables" herein respectively. Moreover, the performance of the contractors will be judged upon successful implementation of all the specific activities indicated above.

Special requirements

By signing the contract, the contractors agree to hold in trust and confidence any information or documents ("confidential information"), disclosed to the contractors or discovered by the contractors or prepared by the contractors in the course of or as a result of the implementation of the contract, and agrees that it shall be used only for the purposes of the contract implementation and shall not be disclosed to any third party.

The contractor reports to the EUACI. The contractor shall be briefed prior to starting with the assignment. The contractor shall de-brief the EUACI prior to finalizing the assignment.

The contractor shall immediately inform the EUACI after 50% and again after 75% use of the overall foreseen working days under this contract.

**8. Cross-cutting issues (integration of the youth, equal opportunities)**

The project will be implemented ensuring equal opportunities for men and women and integration of the youth.

**HOW TO APPLY**

Deadline for submitting the proposals is **8 September 2021, 18:00 Kyiv time**.

The proposal shall include an expert’s CV, financial information/budget for the assignment with an indication of days and fees, motivation letter and should be submitted within the above deadline to vikpop@um.dk with the subject NACP Data Analyst.

Bidding language: English.

Clarification questions

Any clarification questions regarding the bid request should be addressed to Viktoria Popyk, vikpop@um.dk not later than 2 September 2021, 17:00 Kyiv time.