# “Nork” Social Services Technology and Awareness Center

# Project name: "Electronic labour exchange"

**TERMS OF REFERENCE**

for the provision of services

Development, testing, installation and implementation of the state platform “Electronic Labor Exchange”

Specialist position: Security specialist

1. **Basic information**

The aim of the “Electronic Labour Exchange” Project (hereinafter the Project) is to provide a unified state online platform for employers and job seekers in the Republic of Armenia, which is an alternative opportunity aimed at balancing supply and demand in the labour market, contributing to the
integration process and formation of a unified labour market within the Eurasian Economic Union (EAEU).

The project is funded by the Eurasian Fund for Stabilization and Development (EFSD) and has four components.

Component 1 of the **"Design, Development and Implementation of an Electronic Labour Exchange"** project includes the following components:

* 1. Studying the experience of implementing similar projects within the EAEU;
	2. Development, testing, installation and implementation of a public e-Labour Exchange platform available to employers and jobseekers.

These terms of reference provide for the provision of services in preparation for the work implementation under point 1.2 of the Component.

Currently, the business processes of providing services to job seekers and employers in the field of employment in the Republic of Armenia are automated in the information system (hereinafter IS "Gorts"), which performs the functions of providing services in the field of employment in the Republic of Armenia. The mentioned IS was introduced in 2003. The tools of the "Gorts" IS, at the moment, are outdated and have a number of technical and functional problems:

* "Gorts" IS works with the Internet Explorer browser. As the technology currently used in the IS is outdated, this slows down and limits the use of the IS.
* "Gorts" IS database collects data in ASCII format, i.e. there is a problem of reading the material after entering it into the system or retrieving the data from the system (Data Export). In this case, there are technical difficulties, which can be resolved, but require adjustments and additional time investment by the IS users.
* The structure of the "Gorts" IS is complex and overloaded with information, making it difficult for users to register in the IS and find the data they need.
* The structure of the "Gorts" IS is outdated and its optimization is not feasible: there are sections that need to be removed or added due to changes in legislation. There are state employment programmers and related business processes that need to be automated in the IS, but the technical format of IS limits such automation processes.
* The "Gorts" IS lacks a separate interface for job seekers and employers, which would make it much easier to accept applications and receive services online without requiring users to visit the relevant agencies in person.

In order to solve the above-mentioned problems and to ensure that job seekers and employers receive employment services in Armenia at a qualitatively new level, saving time and resources, it is planned to design, develop and implement the information system (state online platform) "Electronic Labour Exchange", which will include all the basic functions of the "Gorts" IS, but will be much more convenient and efficient in use.

Following the development and implementation of the “Electronic Labour Exchange” information system, the "Gorts" IS will be decommissioned and the “Electronic Labour Exchange” IS will fully replace the "Gorts" IS.

The main advantages of the “Electronic Labour Exchange” online platform will be, among others, the following

* The “Electronic Labour Exchange” online platform has two main modules: external and internal. With the external module, job seekers and employers will be able to create and manage their personal profile, create their CV or publish job ads, search for and find an employee or vacancy, apply for unemployment status, participate in public employment programmers and apply for other employment services. The internal module of the “Electronic Labour Exchange” online platform will allow for full automation of the business processes carried out by the employment departments of the regional centers of the Integrated Social Service, allowing them to increase the efficiency of their work and reduce the time spent through a user-friendly interface and up-to-date solutions.
* The availability of an analytical block of the "Electronic Labour Exchange" online platform, which will make it possible to obtain accurate data and statistics on employment indicators in the Republic of Armenia, which will contribute to improving the legal regulation of employment and increasing the effectiveness of the programmers being implemented.
* Integration with external databases will make it possible to retrieve data from primary sources in real time. This will improve the quality of public services provided to users.

“Nork” Social Services Technology and Awareness Center will provide the Consultant with all the necessary documentation and information for the development and implementation of the Electronic Labor Exchange platform, in particular:

* Technical requirements for the development, testing, installation and implementation of the state platform “Electronic Labor Exchange”, which describes all the necessary modules, processes and fields of the platform. These technical requirements include tasks for all specialists involved in the development process. The following specialists will be involved in the development of the new functional platform “Electronic Labor Exchange”: project manager, business analyst, technical team leader, Back-end developers, Front-end developers, database engineer, UI/UX designer, DevOps engineer, QA specialists, technical writer, security specialist and trainer (hereinafter – Project Team).

## Objectives

The purpose of this technical assignment is to provide security of the platform as part of the assignment for the development, testing, installation and implementation of the state platform “Electronic Labor Exchange”. To complete this technical assignment, an individual consultant is hired as a Security specialist who will provide security of the platform.

## Scope of services

## To achieve the set Goal of the assignment, it is necessary to complete the following tasks:

* Conduct a thorough and systematic analysis of secure software application code to identify potential vulnerabilities and security weaknesses.
* Perform source code analysis of web applications, mobile applications and other software components using both manual and automated methods.
* Identify common security flaws such as injection attacks, cross-site scripting (XSS), insecure authentication mechanisms, and insecure data storage.
* Evaluate the effectiveness of implemented security controls, encryption algorithms, access control mechanisms, and error handling procedures.

## As a result of performing the above tasks, in collaboration with all involved specialists, the functioning of the following platform modules should be ensured:

## Content modules:

*Online platform:*

* An information module through which users of the online platform can obtain information on employment news in the Republic of Armenia.
* User account creation module.
* A login module for the online platform, which will have two main interfaces:

*Applicant:*

* + Applicant registration, with the following main options: registration using the social card number and automatic identification through it in the database of the State Population Register and registration using the eID system;
	+ Creating a CV;
	+ Job advertisements;
	+ Ability to search for and filter vacancies of interest to the job seeker offered by employers (this section will include a tool for communication between employers and job seekers (as well as between job seekers and job seekers/employers and employers));
	+ Online application module for job vacancies;
	+ Public-private employment programmes;
	+ Integration with the Unified Search System "Work without Borders" (EEU);
	+ Certificates and other documents on the job seeker that can be automatically downloaded from the platform (the terms of reference to be developed by the Consultant should include a tool for automatic generation of certificates based on the "Electronic Labour Exchange" databases);
	+ Notices;
	+ FAQ (frequently asked questions);
	+ Online chatbot - quick communication with a member of staff of the USS (hereinafter referred to as the Unified Social Service);
	+ Settings.

*Employer:*

* + Employer registration / My vacancies, with the following main options: registration using a taxpayer number and automatic identification through it in the database of the State Register of Legal Entities;
	+ Other job advertisements;
	+ Ability to search and filter applicants of interest to employers (this section will include a tool for communication between employers and applicants (as well as between applicants and applicants/employers and employers));
	+ Online application module for applicants to submit a job application;
	+ Public-private employment programmes;
	+ Integration with the Unified Search System "Work without Borders" (EEU);
	+ Certificates and other employment-related employer documents that can be automatically downloaded from the platform (the terms of reference to be developed by the Consultant should include a tool for automatic generation of certificates based on the "Electronic Labour Exchange" databases);
	+ Notices;
	+ FAQ (frequently asked questions);
	+ Online chatbot - quick communication with an ESS member of staff;
	+ Settings.

## The internal ESS system:

* *Applicant:*
* Applicant registration module, which will display applications from applicants sent from their personal accounts, as well as for registration of applications received in paper form by the staff of the regional centers of the Republic of Armenia Unified Social Service;
* An applicant's personnel file that will contain all the information about the applicant that is necessary for the provision of employment services in the Republic of Armenia;
* Job offer;
* State employment programmes of the Republic of Armenia;
* References and other documents.
* *Employer:*
* Employer registration module, which will display applications from employers sent from their personal accounts, as well as for registration of applications received in paper form by the staff of the regional centers of the Republic of Armenia's Unified Social Service;
* Vacancies;
* An offer for job seekers;
* State employment programmes of the Republic of Armenia;
* References and other documents.
* A system for automatic generation of reports with forms approved by resolutions of the RA Government, orders of the RA Minister of Labour and Social Affairs, etc. for submission to the Statistical Committee, the RA Ministry of Labour and Social Affairs and other state bodies. (A set of reporting forms will be provided to the Consultant after the contract is signed between the Client and the Consultant). These reports will be automatically generated on users' requests in the relevant section of the "Electronic Labour Exchange" online platform in accordance with the specified time period, territorial attribute and other filters.
* A system for generating financial applications to be automatically generated based on the data of beneficiaries registered in the system who participate in public employment programmes
* A user and directory management module to be used by the "Electronic Labour Exchange" administrator via an interface, e.g., for the purposes of archiving a USS employee account or adding/editing values to directories.

## Technical modules:

* Individual microservices that provide overall system functionality;
* The network interface (API gateway) is the bridge between the user interface and the individual microservices. It should be responsible for receiving all requests from system users, managing the associated microservices and protocol conversion;
* The information system database, which is the main repository of system data;
* Data exchange services to provide data from internal databases to external databases through the RA Government Interoperability Platform;
* Functions and tools that will ensure information and cyber security as well as reliability of the "Electronic Labour Exchange" IS.

##  To achieve the assigned goal technical tasks of the assignment will be provided through the task management system (JIRA).

## Qualification requirements

Security Specialist (hereinafter - Consultant) should meet the following qualification requirements:

* Bachelor's degree in computer science, software engineering, or related field.
* Experience with C#, Java, Python or JavaScript and related platforms.
* Experience in reviewing secure code, developing secure software, or assessing application security.
* Knowledge of common application security vulnerabilities and attack vectors including, OWASP Top Ten, SANS Top 25 and CWE/SANS Top 25.
* Experience with code review tools and platforms such as Checkmarx, Fortify, Veracode or similar static analysis tools.
* Good understanding of secure coding principles, secure software life cycle (SSDLC) and secure coding frameworks (e.g., SAMM, BSIMM).
* Successful implementation of at least 2 projects in the Republic of Armenia or the countries of the EAEU and the EU over the past 5 years (2018-2023) as a security specialist.

# Place of service

During the provision of services, the Consultant must be at the Customer's office (at Ulnetsi 68, Yerevan, Republic of Armenia) for at least 4 hours every working day and participate in face-to-face working discussions and provide security of the platform.

In addition to these meetings, online meetings may be held as needed.

1. **The results of the assignment**

**Result 1:** Consultant's Report.

**Deadlines**: no later than the 15th working day after signing the contract between the Customer and the Consultant.

The report should include a description of the services provided by the Consultant for the provision of security of the platform. The report should be submitted in Armenian and English in paper form (two copies, one in each language) and electronic form.

The period for consideration of each report by the Customer is within 5 working days from the date of its submission by the Consultant. The period for reviewing each report by the Consultant, in case of comments from the Customer, is within 5 working days.

Upon the provision of consulting services within the framework of each of the report (after approval by the Customer), the Customer and the Consultant sign a bilateral certificate of acceptance of services, which is the basis for their payment.

During the entire development period of the platform, the Consultant should work in close cooperation with the Customer in order to obtain the necessary information and directives to be taken into account during the software development process. During the software development process, the Consultant, in close cooperation with the Customer, can adjust and supplement the software development process with his own proposals.

The total period for providing services under this technical specification is 15 days.